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MATERNITY;

A BOOK FOR EVERY

WIFE AND MOTHER.

REVISED AND ENLARGED.

BY MRS. P. B. SAUR, M. D.

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PREFACE.

The time has arrived when a more diffusive knowledge of the laws of health, will be appreciated by the women of our land. It is said, "A little knowledge is a dangerous thing." I contend that *no* knowledge is a greater calamity. Women of this age are seeking earnestly to familiarize themselves with all the arts and sciences, and the leading questions of the day, and are now filling, creditably, positions of trust, which require scholarly attainments.

Yet it may be said with truth, that there is no subject about which the masses of women are so ignorant, as the Anatomy and Physiological laws of their own being. And the result is that there never was a time in the history of American women, when there was such an alarming prevalence of special diseases as at this day.

The important object of this work is to show that this universal suffering *is not* the result of excessive mental development, but a lack of *physical* culture, a want of balance between excitement and rest, especially before maturity has been reached, improprieties of dress, and sedentary habits of life. The greatest need of the age is a better understanding of the laws of our being; it is a point

upon which the future of our race depends. I believe in the enlightenment of mothers and daughters upon this, and all topics pertaining to the physical, mental and moral conditions of women, as the surest means of correcting the glaring evils which to-day embitter the lives of our sex.

With a better knowledge of the physiological life of woman, and a practical application of its laws, a higher type of womanhood will be developed.

This work is designed to supply a long felt necessity in this direction, and it is devoted to a practical consideration of woman and her diseases—their nature, cause, and the rational cure of them.

It does not supplant the necessity of professional skill, in grave cases; but it is designed to make woman intelligent as to the nature of her maladies and the proper means of relief.

If this work shall create a desire on the part of the reader, for a better knowledge of the laws governing her being, coupled with a determination to make a practical application of them, the aim of the book will have been accomplished. I bespeak for it, then, a warm welcome in every home in our land.

PRUDENCE B. SAUR, M. D.

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* Adapted from Pre-Natal Culture by A. E. Newton.

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CHAPTER I.

THE YOUNG WIFE.

A good wife is heaven's last, best gift to man—his angel and minister of graces innumerable—his gem of many virtues—his casket of jewels; her voice is sweet music—her smiles, his brightest day—her kiss, the guardian of his innocence—her arms, the pale of his safety, the balm of his health, the balsam of his life—her industry, his surest wealth—her economy, his safest steward—her lips, his faithful counselors—her bosom, the softest pillow of his cares—and her prayers, the ablest advocate of heaven's blessedness on his head.—JEREMY TAYLOR.

To be the ideal woman here portrayed, perfect health is essential. My subject then, is health, the care, the restoration, and the preservation of health—one of the most important themes that can be brought before a human being, one that should engross much of our time and attention, and one that cannot be secured unless properly inquired into and attended to. The human frame is, as every one knows, constantly liable to be out of order; it would be strange, indeed, if a beautiful and complex instrument like the human body were not occasionally out of tune.

The advice I am about to offer my reader is of

the greatest importance, and demands her deepest attention. How many wives are there with broken health, with feeble constitutions, and with childless homes. Their number is legion. It is painful to contemplate that, in our country, there are far more unhealthy, than healthy wives. There must surely be numerous causes for such a state of things. It will in the following pages, be my object to point out many of the causes of so much ill-health among women, and to suggest remedies both for the prevention and for the cure of such cases.

If a wife is to be healthy and strong, she must use the means—she must sow the seeds of health before she can reach a full harvest of health; health will not come by merely wishing for it. The means are not always at first pleasant, but, like many other things, habit makes them so. Life without health is a burden, life with health is a joy and gladness.

The judicious spending of the first year of married life is of the greatest importance in the making and in the strengthening of a wife's constitution.

The first year of married life generally determines whether, for the remainder of a woman's existence, she shall be healthy and strong, or shall be delicate and weak; whether she shall be the mother of fine, healthy children or of sickly, undersized offspring.

A young married woman ought at once to commence taking regular and systematic *out-door ex-*

ercise, which may be done without in the least interfering with her household duties. There are few things more conducive to health than walking exercise; and one advantage of our climate is, that there are but few days in the year in which, at some period of the day, it might not be taken. Walking—I mean a walk, not a stroll—is a glorious exercise; it expands the chest and throws back the shoulders; it strengthens the muscles; it promotes digestion, making a person digest almost any kind of food; it tends to open the bowels, and is better than any aperient pill ever invented; it clears the complexion, giving roses to the cheeks and brilliancy to the eye, and, in point of fact, is one of the greatest beautifiers in the world. If women would walk more than they do, there would be fewer useless, complaining wives than at present. Walking is worthy of commendation, and is indispensable to contentment, health, strength, and comeliness. During pregnancy walking must be cautiously pursued; but still, walking in moderation is even then absolutely necessary, and tends to keep off many of the wretchedly depressing symptoms often accompanying that state. I am quite sure that there is nothing more conducive to health than the wearing out of lots of shoe leather, and leather is cheaper than physic.

Do not let me be misunderstood: I am not advocating that a delicate woman, unaccustomed to exercise, should at once take violent and long-continued exercise; certainly not. Let a delicate lady

learn to take exercise as a young child would *learn* to walk—by degrees; let her creep, and then go; let her gradually increase her exercise, and let her do nothing either rashly or unadvisedly. If a child attempted to run before he could walk, he would stumble and fall. A delicate lady requires just as much care in the training to take exercise as a child does in learning to walk, but exercise must be learned and must be practiced, if a lady, or any one else, is to be healthy and strong.

A lady should walk *early* in the morning and not *late* in the evening. The dews of evening are dangerous, and are apt to give severe colds, fevers, and other diseases. Dew is more likely than rain to give cold.

Does a wife desire to be strong? Then let her take exercise. Does she hope to retain her bloom and her youthful appearance and still look charming in the eyes of her husband? Then let her take exercise. Does she wish to banish nervousness and low spirits? Then let her take exercise. There is nothing standing still in nature; if it were, creation would languish and die. There is a perpetual motion. And so must we be constantly employed, if we are to be healthy and strong. Nature will not be trifled with; these are her laws—immutable and unchangeable, and we cannot infringe them with impunity.

Let me strongly caution the young wife against the evil effects of *tight lacing*. The waist ought to be from twenty-seven to twenty-nine inches in cir-

cumference; should she lace until she is only twenty-three or in some cases, only twenty-one inches, it must be done at the expense of comfort, of health, and happiness. If stays are worn tightly, they press down the lower part of the abdomen, which may either prevent a lady from having a family, or produce a miscarriage. Tight lacing is also a frequent cause of displacement of the womb Let the dress be loose, and adapted to the season.

Pleasure to a certain degree is as necessary to the health of a young wife, and every one else, as the sun is to the earth—to warm, to cheer, and to invigorate it, and to bring out its verdure. Pleasure, in moderation, rejuvenates, humanizes, and improves the character, and expands and exercises the good qualities of the mind; but, like the sun in its intensity, it oppresseth, drieth up, and withereth. Pleasures, kept within due bounds, are good, but in excess are utterly subversive of health and happiness. A wife who lives in a whirl of pleasure and excitement is always sickly and nervous, and utterly unfitted for her duties and responsibilities; and the misfortune of it is, the more pleasure she takes, the more she craves.

A wife's life is made up of little pleasures, of little tasks, of little cares, and little duties, but which, when added together, make a grand total of human happiness; she is not expected to do any grand work; her province lies in a contrary direction, in gentleness, in cheerfulness, in contentment, in housewifery, in care and management of her

children, in sweetening her husband's cup of life, when it is, as it often is, a bitter one, in abnegation of self; these are emphatically a heritage, her jewels, which help to make up her crown of glory.

The quiet retirement of her own home ought to be her greatest pleasure and her most precious privilege. Home is the kingdom of woman, and she should be the reigning potentate. A father, a mother, children, a house and its belongings, constitute a home—the most delightful place in the world—where affections spring up, take root and flourish, and where happiness loves to take up its abode.

Cheerfulness, contentment, occupation, and healthy activity of mind cannot be too strongly recommended. A cheerful, happy temper is one of the most valuable attributes a wife can have. The possession of such a virtue not only makes herself, but every one around her, happy. It gilds with sunshine the humblest dwelling, and often converts an indifferent husband into a good one. Contentment is the finest medicine in the world; it not only frequently prevents disease, but, if disease is present, it assists in curing it. Happy is the man who has a contented wife!

CHAPTER II.

THE ORGANS OF GENERATION.

The organs of generation are divided into external and internal. The external organs are included under the general name of *vulva*. "They consist in front of the mons Veneris, a fatty cushion covered in the adult female with hairs, and extending back from this on each side, two lips or folds of the skin—the outer ones which are partially covered with hairs, called the labia majora, or large lips, and the inner ones which are covered by a pink colored mucous membrane, called the labia minora, or small lips. Near where the labia minora meet in front is a little fold of membrane called the clitoris. This is usually about one fourth of an inch long, but it sometimes becomes greatly enlarged so as to be an inch or more in length. The clitoris is the seat of special sensation, and becomes somewhat enlarged and hardened when the passions are excited. About one inch back from the clitoris is the opening of the urethra, or outlet of the bladder. Immediately back of this is the opening of the vagina which is the entrance to the internal generative organs."

The breasts are accessory to the generative

organs, and by many anatomists are classed among them. Their development and functions are simultaneous, and the sympathy between them is so marked that one can hardly be affected without the other. They are hemispherical in shape, glandular in tissue and the left one is usually slightly larger than the other. "On the outer surface, and just below the center, is a small conical prominence, called *the nipple*, which is of darker color than the rest of the breast, and is surrounded by a circle called *the areola* (Plate 6), having a deeper tint than the surrounding skin. In blondes the color of the areola is of a rosy hue, in brunettes it is much darker. This color is of importance inasmuch as it is affected by pregnancy, providing a reliable sign by which the physician may determine whether a woman is in a state of pregnancy or not."

The internal generative organs consist of the vagina, the uterus, or womb, Fallopian tubes, and ovaries.

The vagina (Plate 7) is the passage which leads from the *vulva*, or external opening, to the womb. It is from three to five inches in length and passes upward and backward in a somewhat curved direction, and, owing to this curving, it is about an inch longer on the posterior side than on the anterior. Its walls are thick, and capable of dilating or contracting to a considerable extent. It is lined with a mucous membrane throughout, like the uterus, and in virgins is marked with a

number of folds, which gradually disappear after connection, and especially after delivery. The outlet of the vagina is kept closed by means of a circular, or *constrictor*, muscle. This muscle also tends to draw the walls of the vagina together, making them more firm, thus enabling it in a great measure to support the womb above.

The uterus, or womb (Plate 8), was formerly thought to be the most essential of the generative organs, but it is now known to be but the receptacle into which the ripe egg is discharged from the Fallopian tubes. If conception takes place it remains and developes into a new being, otherwise, after a short stay, it passes off.

The form of the womb is nearly that of a pear, the larger end being at the top. The length is about two inches and a half, and its breadth at the top about one and a half inches, while at the lower end it is something less than an inch. Its thickness is also about one inch. It is not round, but flattened, and is slightly curved, or bent, the curved part being toward the back bone, the lower part, or *neck*, projects into the vagina, the walls of which are attached to the exterior some distance above. The walls being very thick the cavity is necessarily very small, and is different in form to the exterior. In the upper part, the cavity is shaped like a triangle, the Fallopian tubes entering at the two upper angles; in the lower part it is continued downward, like a tube which swells out a little more than half way down, and at its termination

opens by what is called the *os uteri*, or mouth of the womb, into the vagina. The womb is kept in position by two *round cords*, or ligaments, attached, one on either side, to the womb. These are about five inches long, and are firmly attached by their other ends to the pubic, or front bones. Without these the womb would be liable to displacements, but as they act with equal force and in opposite directions they necessarily hold the womb in the center. Beside the *round* ligaments there are also the *broad ligaments*, which consist of two sheets of strong membrane, one on either side, which extend from the top of the womb nearly the whole length down, inclosing the round ligaments, tubes, and ovarian ligaments in their substance. They grow fast to the pelvis and assist in maintaining the uterus, ovaries and tubes in their proper situation. There are also two ligaments that connect the womb to the bladder in front, called the *anterior ligaments*, and two others which connect it with the rectum behind, called the *posterior ligaments*. All these, however, do but little toward actually supporting the womb, which is really kept in its place more by the firmness and density of its own substance, and that of the vagina below, and by tension of the muscles in the perineum than by anything else. When these parts become weak from debility or disease the ligaments stretch, the perineal muscles relax, and the walls of the womb and vagina soften till all fall down together, causing *prolapsus uteri*, or falling of the womb.

The substance of the uterus is muscular, and is capable, in its contractions, of exerting great force. The increase in size which it undergoes, at the different periods of gestation, are most extraordinary, and its after contraction to its original dimensions are still more so.

Arteries, veins and nerves (Plates 9, 10 and 11) are plentifully supplied to the womb, so that it is abundantly nutrified, and highly sensitive. Indeed there is no other organ in the body, except the ovaries, that has such extensive sympathies, or that is capable of such rapid growth. The womb, however, is altogether dependent upon the ovaries both for its development and its functional ability. If there are no ovaries the womb will be found merely rudimentary, and if the ovarian action ceases, those of the womb cease also.

The ovaries (Plate 12) are two small, almond-shaped bodies, placed one on each side of the womb. They are enveloped in the broad ligaments and are attached by a strong cord to the womb, and also to the fimbriated edges of the Fallopian tubes. Their color is pale red, and they are covered over with little protuberances and indentations. In *early* life they are quite small, but about the age of puberty they begin to enlarge, and exert a powerful influence over the system generally. In fact, they are the most important of the generative organs, and the part they play in the grand process of reproduction is to produce the egg, or *ova*, from which all living beings origi-

nate. Each ovary contains, embedded in its meshes, about twenty or thirty little vesicles, or cells, about the size of a small pea, called the *Graafian follicles* (Plate 13). These are filled with a whitish fluid, in the midst of which is seen an egg, or ovum, about the size of the point of a pin, or barely discernible with the naked eye. Usually, there are from twenty to thirty of these follicles visible at once, but there are many others, and which are only seen as they develop. The actual number it is impossible to know, but in all probability, there are many more than are usually suspected, and there is good reason for supposing that none are formed in adult life, but that the germs of *all* are contained in the ovaries from the very first formation of these organs. Neither the follicles nor the included eggs are all equally matured when we see them, but some are more perfect than the others, and *one* usually much more so than all the rest. In fact, they ripen, or develop, in succession, one after another, commencing at the age of puberty, and continuing to do so until the *change of life*, when all have been developed. This development of the egg takes place *independently of sexual excitement* or connection, and occurs each twenty-eight days in all healthy women, both married and single, after the age of puberty.

From this it will be seen that, in all normal cases, conception can take place only at the time, or soon after the expulsion of the mature ova from the ovaries, or, in other words, if connection does not

occur until after the ova has left the body, there can be no impregnation until the return of another period. The manner in which the egg is expelled is very curious, and when understood, explains many of the attendant phenomena. If the ovary is examined about three weeks before one of the periods, none of the Graafian follicles or their contained ova, appear very different from the others, but about a week later one of them begins to enlarge and continues to increase in size, at the same time coming nearer the surface of the ovary. Finally, the follicle as well as the surrounding membrane of the ovary bursts and the ova escapes through the opening. This is called *ovulation.* As there are two of the ovaries it is probable that they mature ova alternately, one, one month, and the other the next, though in case one ovary is disabled or destroyed, the other will act regularly and perform the functions of both.

The Fallopian Tubes (Plate 12).—These are two minute tubes, one on each side, extending outward from the upper part of the cavity of the womb. Each tube is about four inches in length, its canal is exceedingly minute, and at the junction with the uterus will barely admit a fine bristle; it continues narrow along the inner half of the tube, then widens into a trumpet-shaped extremity, the margins of which are surrounded by a series of fringe-like processes, termed *fimbriæ.* One of these processes is connected with the outer end of the ovary. As the Graafian follicle bursts, this fimbriated or hand-

like extremity of the Fallopian tube, guided by some unexplainable impulse, reaches over and grasps the ovary, thus securing the liberated egg and conveying it to the opening of the tube, which by contracting behind it and by successive contractions forces it into the cavity of the womb, where, as before stated, it is either impregnated and develops into a fœtus or passes into the vagina and thus out of the body.

Conception, as before stated, usually takes place soon after the ova leaves the ovary. The ova requires about two days to pass through the Fallopian tube, thus reaching the womb about the time that the menstrual flow ceases.

The period in which the ova remains in the womb varies in different individuals; in some it is retained for several days (usually about eight), while in others it passes off almost immediately. Those women who are close observers can often tell to a certainty when this occurs, as it is usually attended with nervousness and as a minute substance like the white of an egg with a fleck of blood in it may often be seen upon the clothing. Impregnation takes place by the union of the male sperm with the female ova. Usually this takes place in the womb but there is no reason why the male germ, once within the cavity of the uterus, should not pass into the Fallopian tubes and there meet the unimpregnated ova. Usually but one ova is discharged from the ovaries at a time, but occasionally both ovaries will discharge an egg into the

womb, or one follicle may contain two eggs. In either case both may be impregnated, and thus produce twins. In those rare cases where three or even four are produced at one birth, it is probable that, for some unexplainable reason, a like number of eggs have been produced by the ovaries.

Nourishment and development of the embryo and fœtus.—The ovum in passing through the Fallopian tube increases in size from one one-hundred and twenty-fifth of an inch to one-fiftieth or one twenty-fifth of an inch by absorption or yolk nutrition. As the egg is small it can furnish nutriment for but a short time. About six days after conception takes place, a membrane forms around the ovum called *the chorion.* This serves to anchor the ovum to the walls of the uterus. From the chorion minute hollow tubes ramify in all directions (Plate 15), and coming in contact with the walls of the uterus draw nourishment from the mucous membranes which line that organ. This nourishment is transmitted to the embryo by means of an organ connecting it with the chorion, and called the *allantois.* The allantois in time develops into the umbilical cord, the villi of the chorion diminish, and finally are obliterated, save at the junction of the allantois with the chorion, where they rapidly enlarge, and this portion at the end of the second month develops into the placenta, from which nutriment is furnished to the fœtus.

The placenta (Plates 22 and 23) is a soft, spongy

mass, nearly circular in form, measuring about seven and one-half inches in diameter and one inch in thickness at the insertion of the umbilical cord. Its weight is about one pound. The fœtal surface is smooth, while the uterine surface has a roughened, spongy feel. The uterine surface of the placenta coheres with the uterus and is connected by the umbilical cord with the fœtus. During intra-uterine life the placenta performs offices similar to those of the lungs and intestines after birth. It absorbs nourishment, renovates the blood, and discharges by exhalation the excrementitious matters originating in the process of fœtal nutrition. The umbilical cord consists of a sheath inclosing a gelatinous mass surrounding two umbilical arteries and one vein. Through the agencies of the umbilical cord, as before stated, the fœtus is nourished and the excesses discharged.

The *growth of the embryo* after fecundation is very rapid. On the *tenth* day it has the appearance of a semi-transparent, greyish flake. On the *twelfth* day it is nearly the size of a pea, filled with fluid, in the middle of which is an opaque spot, presenting the first appearance of an embryo, which may be clearly seen as an oblong or curved body and is plainly visible to the naked eye on the *fourteenth* day. The *twenty-first* day the embryo resembles an ant or a lettuce seed; its length is from four to five lines and its weight from three to four grains. Many of its parts now begin to show themselves, especially the cartilaginous beginnings of the spinal column, the heart, etc.

The *thirtieth* day the embryo is as large as a horse fly, and resembles a worm bent together. There are yet no limbs, and the head is larger than the body. When stretched out it is nearly half an inch long. Toward the *fifth* week the head increases greatly in proportion to the remainder of the body, and the rudimentary eyes are indicated by two black spots turned toward the sides, and the heart exhibits its external form, bearing a close resemblance to that in the adult.

In the *seventh* week bone begins to form in the lower jaw and clavicle. Narrow streaks on each side of the vertebral column show the beginning of the ribs. The heart is perfecting its form, the brain enlarged and the eyes and ears growing more perfect and the limbs sprouting from the body. The lungs are mere sacs, about one line in length and the trachea is a delicate thread, but the liver is very large. The arms are still imperforate. In the seventh week are formed the renal capsules and kidneys. At *two months* the forearm and hand can be distinguished, but not the arm; the hand is larger than the forearm, but it is not supplied with fingers. The distinction of sex is yet difficult. The eyes are prominent, but the lids do not cover the eyeballs. The nose forms an obtuse eminence. The nostrils are rounded and separated. The mouth is gaping, and the epidermis can be distinguished from the true skin. The embryo is from one and a half to two inches long and weighs from three to five drams, the head forming more than one-third of the whole.

At the end of *three months* the eyelids are distinct but shut; the lips are drawn together; the forehead and nose are clearly traceable, and the organs of generation prominent. The heart beats with force, and larger vessels carry red blood; the fingers and toes are well defined, and muscles begin to be developed.

At the *fourth* month the embryo takes the name of *fœtus*. The body is six to eight inches in length and weighs from seven to eight ounces. The skin has a rosy color, and the muscles now produce a sensible *motion*. A fœtus born at this time might live several hours.

At *five* months the length of the body is from eight to ten inches, and its weight is from eight to eleven ounces.

At *six* months the length is twelve and a half inches; weight one pound. The hair appears upon the head, the eyes closed, the eyelids somewhat thicker, and their margins as well as the eyebrows are studded with very delicate hairs.

At *seven* months, every part has increased in volume and perfection; the bony system is nearly complete; length twelve to fourteen inches, weight two and a half to three pounds. If born at this period the fœtus is able to breathe, cry and nurse, and may live if properly cared for.

At *eight* months, the *fœtus* seems to grow rather in thickness than in length; it is only sixteen to eighteen inches long and yet weighs from four to five pounds. The skin is very red, and covered

with down and a considerable quantity of sebaceous matter. The lower jaw, which at first was very short, is now as long as the upper one.

Finally, at *term*, the fœtus is about nineteen to twenty-three inches long, and weighs from six to nine pounds. The red blood circulates in the capillaries, and the skin performs the functions of perspiration; the nails are fully developed.

The Plan of Fœtal Circulation (Plate 24).—As the lungs of the fœtus are dormant the fœtal circulation is a very interesting phenomenon. The blood, passing from the right ventricle into the pulmonary artery, instead of entering the lungs, passes, almost entirely, through the ductus arteriosus into the descending aorta. From here the larger part is conveyed through the umbilical arteries to the placenta, where the interchanges with the maternal blood take place. After being thus renovated and recharged with oxygen, it collects within the umbilical vein and passes back to the fœtal liver. Here a part of it circulates through this organ, while the rest passes direct through the ductus venosus into the inferior vena cava, where it again meets the blood brought from the liver by the hepatic vein, and the two mixing with that returning from the lower extremities and viscera of the abdomen enter the right auricle, and by the Eustachian valve pass into the left auricle, where it becomes mixed with a small quantity of blood returning from the lungs by the pulmonary veins. From the left auricle it passes into the left ven-

tricle, from here into the aorta, from whence it is distributed almost entirely to the upper extremities. Descending by the superior vena cava it enters the right auricle, and from here into the right ventricle, and thus completes the circuit.

CHAPTER III.

MENSTRUATION.

Before entering upon the description and treatment of the disorders of menstruation, it is but proper that I should endeavor to make clear, 1st, of what does menstruation consist; 2d, of the causes which produce it; 3d, of what are its uses in the system of the female. There is probably no function of woman which is so little understood by woman herself, as this. She can tell you that she has had this discharge about every twenty-eight days, how long it lasts, and predict exactly when it will again appear; but why it appears most women are unable to state. This cannot be wondered at when we consider the short time which has elapsed since this function was clearly understood even by medical men. From the earliest ages to the present time there have been numberless theories advanced, but each, one after the other, has fallen to the ground by its own dead weight, until at last the undoubted correct theory has been reached.

In accordance with the universal law of reproduction every living thing comes from an egg or germ. This can be shown as well in the vegetable

as the animal kingdom. The sturdy oak from the acorn, the ear of corn from the grain planted by the farmer, the robin, and the elephant all springing from germs, go to prove the truthfulness of this law. Every seed, every egg contains a germ, which, when brought under proper influences, will produce of its own kind.

Thus far all is plain enough, but where do these germs originate? It has been ascertained that each animal, as well as each plant, is provided with an organ for the production and throwing off of these cells or germs. In woman this organ is the ovary, the sole physiological function or duty of which is to mature and deposit its ova or eggs every twenty-eighth day, from the age of fifteen to that of forty-five, or for about thirty years. This function is suspended only during pregnancy and nursing, but sometimes not even then. There are numerous cases on record where the woman has had her courses regularly during the time she was pregnant, and there are many with whom lactation does not at all interfere. During the maturation or ripening, and discharging of the ovum into the canal or tube which conveys it into the womb, the generative organs become very much congested, looking almost as if inflamed. This congestion at last reaches such a height, that it overflows as it were, and produces a discharge of bloody fluid from the genitalia or birthplace. As soon as the flow commences the heat and aching in the region of the ovaries, and the weight and dragging sensa-

tion diminish and gradually disappear. Thus it will be seen that menstruation consists merely in the ripening and discharge of an ovum or egg, which, when not impregnated, is washed away by the menstrual fluid or blood, poured out from the vessels on the inner surface of the womb. The marvelous regularity of menstruation has always excited great wonder, but why should it? When we look around, we see that both animal and vegetable life have stated and regular times at which germ production takes place. Fruits and vegetables ripen, and animals produce their young at certain periods. It is a law of nature, and why should not woman obey it, in her monthly term. Now since it has been shown that menstruation consists in the ripening, and règular deposit of an egg—the flow being but the outward visible sign of such an act—it is possible that a woman may menstruate regularly without having any show. To prove this, there are many cases on record where a woman has married, and become pregnant without having had the least show, which would be impossible if she did not menstruate. Indeed there are certain physicians who claim that all sanguinous flow is abnormal, and certainly menstruation should be devoid of all pain. A woman in perfect health should feel no necessity for deviating from the ordinary duties or occupations and no special care need be taken at this time. Under existing conditions however, such cases are extremely rare and by far the exception rather than the rule.

As has been before remarked, menstruation commences at about the age of fourteen or fifteen in this country. In warmer climates it appears earlier, and in colder ones, later. Menstruation, menses, courses, catamenia, monthly periods, and "being unwell," are some of the terms by which this function is designated. Those who are brought up and live luxuriously, and whose moral and physical training has been such as to make their nervous systems more susceptible, have their courses at a much earlier period than those who have been accustomed to coarse food and laborious employment. The appearance of the menses before the fourteenth year is regarded as unfortunate, indicating a premature development of the organs; while their postponement until after the sixteenth year, is generally an evidence of weakness, or of some disorder of the generative apparatus. If, however, the person has good health, and all her other functions are regular; if her spirits are not clouded, nor her mind dull and weak, it should not be considered necessary to interfere to bring them on, for irreparable injury may be done. The first appearance of the menses is generally preceded by the following symptoms: Headache, heaviness, languor, pains in the back, loins, and down the thighs, and an indisposition to exertion. There is a peculiar dark tint of the countenance, particularly under the eyes, and occasionally uneasiness and a sense of constriction in the throat. The perspiration has often a faint or sickly odor, and the smell

of the breath is peculiar. The breasts are enlarged and tender. The appetite is fastidious and capricious, and digestion is impaired. These symptoms continue one, two or three days, and subside as the menses appear. The menses continue three, five or seven days, according to the peculiar constitution of the woman. The quantity discharged varies in different individuals. Some are obliged to make but one change during the period, but they generally average from ten to fifteen. At about the age of forty-five the final cessation of menstruation takes place, and this period often excites much fear. Sometimes the symptoms are mistaken for those of pregnancy—such as sickness at the stomach, capricious appetite, swelling and pain in the breasts. The change is generally gradual. The discharge may return every two or three weeks, then cease for two or more months, return again for several months as regular as ever, and finally disappear altogether. It is during the menstrual period that the system, especially of young persons, is more susceptible to both mental and physical influences. The emotions of joy, grief, love and sympathy are more easily excited than at other times. Women are liable to be very irritable and exacting. For this reason they should be treated with more than usual indulgence and sympathy. Husbands should especially at such times be tender and charitable toward their wives. Upon woman, the weaker vessel, has been placed the chief burden of reproduction with all its care,

pain and sorrow. It therefore little becomes the man who is relieved from this load to be cold and exacting toward the one, who, in the discharge of her duty to him and the race, endures with loving patience a multitude of ills that he knows not of.

Very much depends upon the regular and healthy action of the discharge, for to it woman owes her beauty and perfection. Great care should therefore be used to guard against any influences that may tend to derange the menses. A sudden suppression is always dangerous, and among the causes which may produce it may be mentioned—sudden frights, fits of anger, great anxiety, and powerful mental emotions. Excessive exertions of every kind, long walks or rides, especially over rough roads, dancing, frequent running up and down stairs, have a tendency not only to increase discharge, but also to produce falling of the womb. Patent medicines and nostrums which are recommended for female complaints, purgatives, emetics, and liquors, may either increase or arrest the discharge. Cold baths, foot baths, wetting the feet by the wearing of thin shoes, are also very injurious during this period. A young lady anxious to attend a party or ball while she is unwell, will take a hip bath to arrest the discharge, but what a train of horrors follows such an insane act, and still there are many foolish enough to do this. During the menstrual period no treatment is necessary, unless some of the various derangements of menstruation afflict the female, and the management of

these will be found under their proper heads in the pages following.

The disorders incident to menstruation are: *Amenorrhœa*, *Menorrhagia* and *Dysmenorrhœa*.

Amenorrhœa.—Under this head may be included delayed menstruation, suppressed menstruation and chlorosis, or green sickness.

When the menses do not appear at the time when they may naturally be expected, we call it delayed or obstructed menstruation. It is, however, of great importance to know whether a girl is sufficiently developed to make it necessary for the menses to appear, although she may have reached the proper age. As long as the girl has not increased physically, if she has not become wider across the hips, if her breasts have not become enlarged, and if she experience none of the changes incident to this period, an effort to force nature is positively injurious. In this case a general treatment will be called for. The girl should be taken from school, from all debilitating influences, such as bad air and poor diet; from the exciting and exhausting scenes of city life, and sent to the country, to the mountains, or to the seashore, to breathe pure air, rich in oxygen; take daily exercise, and have sunshine and nourishing food. A season of this kind has brought many an enfeebled girl to a state of health and vigor which would before have seemed impossible. If, however, she is fully developed, and yet suffers from time to time from congestions of the head, breast, or ab-

domen, it will be necessary to interfere. The following are the symptoms which will generally be found present in these cases: Headache, weight, fullness, and throbbing in the center of the cranium, and in the back of the head; pains in the back and loins; cold feet and hands, becoming sometimes very hot; skin harsh and dry; slow pulse and not unfrequently attended with epilepsy.

Treatment.—It is well for the patient, a few days before the period, to take a warm hip or foot bath twice a day, and at night when retiring to apply cloths wet in warm water to the lower part of the abdomen. The bowels should be kept open, and if there is pain or fullness of the head during the discharge or before it, use the following:

Elixir Bromide Potas. . . .	3 ounces.
Tincture Belladon. . . .	½ dram.
Spirits Nitre Dulc. . . .	1 ounce.

Dose, a teaspoonful every two hours until relieved of pain.

Between the periods, if the system is weak, the following may be taken:

Precip. Carbonate of Iron, . .	5 drams.
Extract Conium, . .	2 "
Balsam Peru, ...	1 dram.
Alcohol, ...	4 ounces.
Oil Wintergreen, ...	20 drops.
Simple Syrup, ...	8 ounces.

Dose, two teaspoonfuls three times a day. Shake the mixture before using.

Or,

Syrup of Orange Peel, . . .	1 ounce.
Rose Water, ...	7 ounces.
Muriated Tincture of Iron, . .	1 ounce.

Mix. Dose, one teaspoonful in half a glass of water three times a day.

Suppression of the Menses.—By suppression is meant a disappearance of the menses, after they have become established, and may be either acute or chronic. Amenorrhœa is not necessarily a grave malady unless complicated with great constitutional disturbance, or dependent on some remote disease; isolated, and recent, it may prove but a delay.

Among the causes of suppression may be mentioned the following: Sudden exposure to cold and humid air when the body is overheated, cold baths or ice cold drinks, loss of blood, a wound, a blow, a fall, a burn, an excessive pain, a strong odor, a great mental shock, powerful drugs, an irritated stomach, poor nourishment, the use of acid beverages, a sedentary life, too much sleep, overwork, late hours, the use of articles of a stimulating nature; moral affections, such as sadness, grief, disappointment, etc.; the use of astringent medicines, and the suppression of the calls of nature. It may also be caused by an imperforated hymen, in which case a surgical operation will be necessary.

Symptoms.—The following are the symptoms generally found in amenorrhœa, existing with a fully developed body and sexual organs: Headache; fever, hot skin, quick pulse, thirst; cold hands and feet; weight, fullness and throbbing in the center and back part of the head; pains in back and loins.

The last vertebra may be so sore as to make it impossible to retain a sitting posture. Not unfrequently the pains of the abdomen are short and shooting, attended by swelling and tightness; the breasts, also sympathetically affected, become tumified and painful, and yield a white fluid, often mistaken for milk. When the suppression is chronic, the whole system responds to the unnatural condition, the appetite is lost, or replaced by a desire to eat strange things; the irritable stomach rejects food, or is troubled by nausea; the heart, oppressed, is subject to palpitations; the head is full and heavy, and sometimes excruciatingly painful; the ears ring with strange sounds; the intestines in their turn are irritated, producing diarrhœa or dysentery; the bladder, the next neighbor to the womb, shares in the general derangement, causing frequent and difficult urinations. This condition finally induces general lassitude, sadness or malaise. The face becomes pale and puffed, the flesh flabby, the movements languid; the mind yields easily to moral influences, and becomes morose or melancholy.

General Treatment.—When the suppression is caused by some disease in the system, that disease must be cured before the menses will return. For sudden suppression, use the warm sitting bath or foot bath. Apply cloths wet in warm water to the lower part of the abdomen, and drink freely of warm water. If the suppression is chronic, and the patient is delicate, in the interval between the

menses use the shower, or the full bath of cold or tepid water, rubbing the body briskly with a coarse towel, especially around the abdomen, loins and genital organs.

It should be remembered that the tendency of menstruation is to reappear, and that in due time nature makes the effort to re-establish it; it is then that the means to assist it should be employed.

Copious injections of warm water or a solution of warm water and salt, or soap and water may be used several times a day. Injections of ammonia are also often beneficial, adding about ten drops of aqua ammonia to one pint of warm water or milk. Another most efficient remedy is electricity. In many cases of suppressed menstruation the simple external application of the current will prove sufficient. In cases where there is a deficient development of the womb the applications should be made direct to the uterus by instruments made specially for this purpose.

As soon as the discharge has ceased, a warm hip bath will generally bring it on. If there is much inflammation of the uterus give the following:

Tincture Aconite Leaves,	2 drams.
Sweet Spirits of Nitre,	1 ounce.
Simple Syrup,	3 ounces.

Dose, one teaspoonful every two or three hours.

If the discharge cannot be brought on, wait until the next period. A few days before the term, the bowels should be freely opened, and kept open

until the period for the discharge has arrived. The pill of Aloes and Iron of the United States Dispensatory is one of the best that can be given. Give from one to three pills daily. If there is no evident reason for the discharge not appearing, such as pregnancy, or inflammation of the neck of the womb, and the woman is suffering from the suppression, use the following:

Caulophyllian,	1 dram.
Extract Aconite,	8 grains.
Aloes,	10 "
Sulphate of Iron,	10 "

Make into forty pills. Dose, two or three pills, taken night and morning.

Or this:

Aloes,	1 dram.
Myrrh,	1 "
Sulphate of Iron,	1 "
Extract Black Hellebore,	1 "
Oil Savine,	1 "

Make into thirty pills. Dose, one pill from three to six times a day.

The remedies should always be taken a few days before the period arrives for the menses. If chronic suppression is the result of any acute disease, the health must first be re-established; otherwise, it would be wrong to force the menses. When this has been done, immediately before the return of the period, a warm hip bath should be taken every night for six nights, and one of the following pills taken three times a day:

Fresh Powdered Ergot of Rye,	50 grains.
Barbadoes Aloes,	12 "
Essential Oil of Juniper,	12 drops.

Make into twelve pills, with syrup or mucilage, washing down each pill with a cupful of pennyroyal tea.

Chlorosis, or Green Sickness.—This disease generally occurs in young unmarried women who are weak and delicate. It manifests itself about the age of puberty, and is accompanied by feeble appetite and digestion. There is no menstrual discharge, or else it is very slight.

Causes.—Such as derange the vital functions, as innutritious food, residence in damp and ill-ventilated apartments. It may be hereditary, all the females of the family being liable to the same disease. Those who drink largely of tea, coffee, diluted acids, bad wines, and indulge in tight lacing, are predisposed to this disease. Among the exciting causes may be mentioned disturbing emotions, unrequited love, home-sickness, depression of spirits, etc.

Symptoms.—The symptoms characterizing this disease do not manifest themselves all at once, but gradually, insidiously, and almost insensibly come upon the patient. She usually first complains of general lassitude, and an aversion to physical or mental labor of any kind. There is a peculiar color of the skin, not excessively white, but a paleness, mixed with yellow and greenish tinges. The lips at times are almost white, the eyelids livid and swollen. The skin feels cold to the touch. The

gums become pale, and the tongue is generally coated white, and there is a pasty taste in the mouth in the morning. The breath is offensive. The patient appears weak, and tires very soon after slight exertion. She breathes hurriedly, not from any disease of the lungs, but because she has not sufficient strength to expand the chest to its full capacity. The sleep is disturbed and unrefreshing. The bowels are constipated, and sometimes there is nausea and vomiting. The pulse is small and frequent. She is sad, subject to fits of weeping, and prefers to be alone. The appetite is diminished, and dyspeptic symptoms, as heartburn, sour stomach, pain in the stomach with nausea, show themselves. She craves indigestible substances, as slate pencils, chalk, charcoal, etc. Excessive constipation is followed by diarrhœa of badly digested substances. As the affection proceeds, the lower extremities become swollen, hectic cough sets in, sometimes attended with spitting of clots of blood. The abdomen becomes tense and swollen, and so much so sometimes, that the patient may be accused of being pregnant. The menses, if they have appeared, gradually become scanty, and are attended with great pain; they continue but a short time, are pale and watery, and finally cease altogether. There is sometimes severe pain through the left breast, or the chest. In some cases nervous symptoms, as hysterical fits, spasms, etc., manifest themselves. Chlorosis may be mistaken for disease of the heart, or consumption. I have given

here a full description of the disease, so that it may be recognized from the start. All of the above symptoms are not present in every case, but you will frequently find a majority of them.

Treatment.—If we take into consideration the fact that the cause of the disease is impoverishment of the blood, the treatment will not be difficult. Exercise freely in the open air; protect the body from chilliness by warm clothing, and plenty of it. The patient should sleep on a mattress, in a well ventilated room. The diet should be nourishing, without being stimulating. It is important that the habits should be regular, and the mind kept cheerful by society and innocent amusements. Before the medical treatment is commenced, the exciting causes of the disease must be removed. A complete change must be made in the existence of the patient. If she is confined closely at school she must be removed; if she is inclined to confine herself to the house, send her to the country. Picture to her the danger she is in, by the continuance of such a life; give her plenty of outdoor exercise. The mental and moral causes are the most difficult to remove, but a change of scenery and new friends will do much toward it. For those who are shut up in factories, or who work all day in a stooping position, a change of employment must be made. A bath of tepid water in the morning followed by a brisk rubbing will be beneficial. Also the frequent use of the sitting bath, and the sponge bath in the evening. Active exercise should

precede and follow all baths. During menstruation all applications of water should be omitted.

The following recipes are recommended by Dr. Pancoast, of Philadelphia. They are to be taken on alternate days; that is, take No. 1 on one day, No. 2 the next day, and so on:

No. 1.—Precip. Carbonate of Iron, . . 5 drams.
Extract of Conium, ... 2 "
Balsam Peru, ... 1 dram.
Oil Cinnamon, ... 20 drops.
Simple Syrup, ... 8 ounces.
Pulverized Gum Arabic . . . 2 drams.

Mix. Dose, two teaspoonfuls three times a day, every other day after meals. Shake before using.

No. 2.—Tincture of Nux Vomica, . . . 1 dram.
Syrup Iodide of Iron, . . . 1 ounce.
Simple Syrup, ... 4 ounces.

Mix. Dose, one teaspoonful three times a day, every other day, in water, after meals.

Profuse Menstruation—Menorrhagia.—By Menorrhagia we understand an immoderate flow of the menses. There is no fixed amount of blood which is lost at the menstrual period, but it varies in different women. It will average, however, from four to eight ounces. The quantity discharged may be estimated by the number of napkins used. Each napkin will contain about half an ounce, or one tablespoonful, so that eight napkins would contain four ounces; twenty, ten ounces, etc.

Causes.—Some women are predisposed to uterine hemorrhages, from a relaxed, or flabby state of the texture of the uterus. Frequent child-bearing,

abortion, high living, too prolonged and frequent nursing, may induce flooding. Among the exciting causes we may mention over-exertion, dancing, falls, lifting heavy weights, cold, and mental excitements.

An inordinate flow occurs generally in women of sanguine temperament, whose heart's impulse is strong, and whose circulation is free; again where the passions are strong and exposed to over-excitation, reflex action might determine blood to the generative organs and induce congestions that nature relieves by profuse menstruation. The disease is also common among women of nervous, irritable temper; in those who are corpulent and of indolent habits, and those who live in hot climates or occupy rooms having a high temperature. It is also an hereditary predisposition, and, come from what cause it may, it is generally aggravated during the summer season.

Symptoms.—Exhaustion of the bodily powers; weakness and pain in the back, extending to the hips, and across the loins; sallow and sunken features; headache, with throbbing of the temples; pain in the left side, stomach and bowels; sometimes diarrhœa, with great nervous debility.

Treatment.—The patient must lie down on a hard bed, and abstain from all stimulating food and drinks. The room should be cool, and she should be lightly covered with bedclothes. Soak the feet in warm water, and if the flowing is excessive, apply cloths, wrung out in vinegar and water, to the

lower bowels. The hips must be elevated higher than the head.

Menorrhagia, or flooding, proceeding from any cause, should be treated promptly, as serious consequences may follow its continuance. In this, as in Dysmenorrhœa, we recommend with confidence doses of from one to two teaspoonfuls of Hayden's Viburnum Compound in a little hot water, repeated as often as the urgency of the case demands. The following will be found very successful:

Oil Cinnamon,	2 drams.
Oil Erigeron,	2 "
Pulverized Gum Arabic,	1 "
Water,	4 ounces.

Dose, one or two teaspoonfuls every one, two or three hours, in sweetened water.

During the intervals of the period, the system must be toned up with some preparation of iron. One of the best is as follows:

Precipitated Carbonate of Iron,	5 drams.
Extract Conium,	2 "
Balsam Peru,	1 "
Oil Cinnamon,	20 drops.
Simple Syrup,	8 ounces.
Pulverized Gum Arabic,	2 drams.

Another effectual prescription is the following, recommended by Prof. Meigs of Philadelphia:

Powdered Alum,	5 to 20 grains.
Grated Nutmeg,	2 "

Make into a powder, and give in syrup (made of white sugar boiled down) every hour.

Painful Menstruation — Dysmenorrhœa. — The word dysmenorrhœa means a difficult monthly flow, and is always preceded by severe pains in the back and lower part of the abdomen.

The suffering connected with this disorder is of the most intense and acute character, yet thousands of women periodically bear this torture, smiling during the short interval of ease that comes between the spasms that seem to rend them. There is a pain enduring capacity in woman that certainly man knows not of; in the throes of labor she smiles in anticipation of gladness, in the racking pains of dysmenorrhœa she only prays for the hour of relief. It is that struggle between the moral and physical from which woman comes out a heroine.

Causes.—Taking cold during the period; fright, violent mental emotions; obstinate constipation; sedentary occupations; smallness of the mouth and neck of the womb. Women subject to this trouble are generally relieved by marriage.

Symptoms.—Severe bearing down pains in the region of the uterus, like labor pains; restlessness, coldness, flashes of heat, with headache; aching in the small of the back, lower part of abdomen, and thighs; the discharge is scanty, and contains shreds of fiber and clotted blood.

Treatment.—Women of a sanguinous temperament should make frequent use of the cold bath, taking the precaution to follow it quickly by brisk, hard and dry rubbing, but nervous and lym-

phatic temperaments will find the warm bath more conducive to their comfort. During the three or four days just preceding the menses the body should be kept at rest in a reclined position, and every night a hot hip bath should be taken before retiring. During the access of pain or spasms hot hip baths, applications of hot poultices to the abdomen, hot applications to the feet, mucilaginous—such as hot decoctions of hops, marsh mallow or chamomile, etc.,—and vaginal injections of warm water will afford relief. If the bowels are not free, they should be relieved by warm enemas of water. No iced water, or very cold drinks of any kind, should be taken immediately before or during menstruation ; a mouthful of cold water has in many instances brought back all the pains that have been relieved by proper treatment. Dr. Hayden's Viburnum Compound which is prescribed and recommended by more physicians than any other preparation, is now employed with the greatest success. It is agreeable to the taste, perfectly safe, free from all opiates, and may be obtained in any quantity of any respectable druggist. In cases where the patient suffers greatly at the monthly periods it is well to commence by giving teaspoonful doses every night for a week previous to the usual time. On the appearance of the catamenia the patient, if she has not already done so, should immediately go to bed, and cover up warmly. Stimulating food and drinks should be avoided. Give two-teaspoonful doses of the Vi-

burnum Compound every half hour, in a wineglassful of *hot* water, sweetened, and continue to do so until relief is obtained, unless the stomach rejects it, in which case the dose should be reduced until it is tolerated. Frequently, after taking the Viburnum Compound the patient will sleep soundly for several hours from the sudden cessation of pain. She should not be awakened through any fear of over-sleeping, as the Compound does not contain any narcotics whatever, nor does it leave any disagreeable after effects. It may be given to a child, if necessary, without any special caution.

The following is also highly commended:

Tincture of Aconite Leaves, . .	2 drams.
Sweet Spirits of Nitre, ...	1 ounce.
Morphia, ...	2 grains.
Simple Syrup, ...	4 ounces.

Dose, one teaspoonful every half hour until relieved.

Change of Life.—By the phrase, "change of life," or the critical period, we understand the final cessation, or stoppage of the menses. It usually takes place between the ages of forty and fifty, although in some cases it may occur as early as thirty, and in others not until sixty; however, we can expect the change about the forty-fifth year. "At puberty the ovary enlarges until it attains its full development, and begins its work of casting off each month a perfected ovule. When the forty-fifth year of a woman's life is reached the reverse process begins. The ovary begins to shrivel, soon

reaching the size and acquiring much the appearance of a peachstone. A few months later it is still more shrunken, and after the cessation of the menses it often becomes so shrunken as to be scarcely recognizable. At the same time that the ovaries are undergoing this remarkable degenerative change, a similar change is taking place in the other organs of generation. The uterus also diminishes in size, as does also the vagina. The mouth of the womb becomes contracted, and after a time entirely closed. The upper part of the vagina is often contracted to such a degree as to produce folds closely resembling those which result from serious inflammations about the uterus. The breasts are diminished in size. These changes indicate unmistakably the decline of the function of reproduction, preparatory to its entire suspension."

The symptoms will vary according to the constitution of the woman; in some the change occurs by the discharge gradually diminishing in quantity, in others by the intervals between the periods being lengthened. The woman may pass this period without having any more unpleasant symptoms than an occasional rush of blood to the head, or a headache. Others, however, may have very severe symptoms arise, which will require the care of an intelligent physician. These disagreeable sensations should receive a careful consideration, and not be hushed up with the reply that these complaints arise from the "change of life," and will vanish whenever that change takes place. The

foundation of serious trouble may be laid, which will make the remainder of her existence a burden, and cut short a life which might have been conducted to a green old age. While this change is in progress, in probably the majority of cases there is more or less disturbance of the health. It is sometimes quite impossible to say exactly what is the trouble with the patient, except that she is out of health. The following are some of the symptoms which may arise:

Symptoms.—Headache, dizziness; biliousness, sour stomach, indigestion, diarrhœa, costiveness, piles; itching of the private parts; cramps and colic in the bowels; palpitation of the heart; swelling of the limbs and abdomen; pains in the back and loins; paleness and general weakness.

The neuralgias, nervousness, fidgets and hysterias which afflict some women at this period are such as to make life miserable. Flushings are also a frequent nervous disorder, caused by the rushing of the blood to any part of the body. Sometimes the flushing is accompanied by excessive heat or by violent throbbing. Sometimes nausea and vomiting accompany the flushing, or the patient may be thrown into a profuse perspiration, while at other times the mind becomes so excited that it amounts to actual delirium. These perspirations are sometimes so profuse as to saturate the bedclothing. They may follow the flushing or occur independently. Usually they occur during sleep. They also attend mental excitement of any kind.

Most women look forward to "change of life" with serious apprehension, and the prevailing opinion is that it is a period of great risk to health and even to life. This is a mistaken notion, however, and recent investigation proves that there is less mortality among women at this period than among men of the same age, and also that there is less mortality among women during this decade than during any other decade after the age of puberty. Women who safely pass this period have also a better chance of living to a ripe old age than have men. The woman who comes to this period with a constitution unimpaired by fashionable dressing, by dissipation, or by excesses of any kind, has little or nothing to fear, and will almost invariably pass it quickly, and with safety. To the woman with feeble health and a broken constitution, however, this may prove indeed a critical period, and she may well look forward to this time with apprehension and forebodings. A proper preparation will do much to mitigate the sufferings of this age, and it is well, indeed, if being forewarned in time, she begins to correct the evils of the past in matters pertaining to dress, diet and exercise. It is highly important that all the laws of health be rigorously obeyed. A warm bath taken two or three times a week will be found very beneficial. The pains in the back or bowels can usually be removed by applications of heat to the affected parts. This may be done by means of a hot brick, or by the use of the hot water bottle. The treatment should be taken twice a day, and should last

about one half hour. For congestion of the uterus and for hemorrhages the vaginal douche is invaluable. The water used should be hot, and should be administered by means of the fountain syringe, though any syringe may be used, but care should be taken that the water be thrown high up against the affected parts. In case of inflammation of the uterus or ovaries a hot sitz-bath should be taken daily, and for "flushings" the most simple and efficient treatment is hot spongings of the congested parts. Profuse sweating may be relieved by sponging with hot salt water, or with equal parts of water and alcohol.

"With the approach of the change of life it is usual for the sexual passions to cease. The reproductive organs have finished their work, and it is but natural that the feelings dependent upon them should also cease to exist. Sometimes, however, the opposite is the case, and the passions increase in intensity, and become more violent than at any other time of their lives. This condition of things should always be looked upon with serious apprehensions, for it is against nature, and may be the indication of some grave disease. There is no doubt but that sexual gratification at this time is a very common cause of intensifying all the numerous inconveniences and ailments which are attendant upon this period, and hence continence is not only recommended but should be enjoined as one of the most essential hygienic measures by which a safe and rapid transit through this period of sexual decline may be insured."

CHAPTER IV.

PREGNANCY.

The first sign that leads a woman to believe that she is pregnant is her *ceasing to be unwell.* This, providing she has just before been in good health, is a strong symptom of pregnancy; but still there must be others to corroborate it.

A healthy married woman, during the period of child-bearing, suddenly ceasing to menstruate, is of itself alone almost a sure and certain sign of pregnancy—requiring but little else to confirm it. This fact is well known by all who have had children—they base their predictions and their calculations upon it, and upon it alone, and are, in consequence, seldom deceived.

But as failure to menstruate may proceed from other causes than that of pregnancy—such as disease or disorder of the womb, or of other organs of the body—especially of the lungs—it is not by itself alone entirely to be depended upon; although, as a single sign, it is—especially if the patient is healthy—*the most reliable* of all the other signs of pregnancy.

The next symptom is *morning-sickness.* This is one of the earliest symptoms of pregnancy; as it

sometimes occurs a few days, and indeed generally not later than two or three weeks, after conception. Morning-sickness is frequently distressing, oftentimes amounting to vomiting, and causing a loathing for breakfast. This sign usually disappears after the first two or three months. Morning-sickness is not always present in pregnancy, but, nevertheless, it is a frequent accompaniment; and many who have had families place more reliance on this than on any other symptom. Morning-sickness is one of the earliest, if not the very earliest, symptom of pregnancy; and is, by some ladies, taken as their starting point from which to commence making their count.

Morning-sickness, then, if it does not arise from a disordered stomach, is one of the most trustworthy signs of pregnancy. A lady who has once had *morning-sickness* can always, for the future, distinguish it from each and from every other sickness; it is a peculiar sickness, which no other sickness can simulate. Moreover, it is emphatically a *morning-sickness*—the patient being, as a rule, for the rest of the day entirely free from sickness, or from the feeling of sickness.

A third symptom is *shooting, throbbing and lancinating pains, and enlargement of the breast, with soreness of the nipples*, occurring about the second month; and in some instances, after the first few months, a small quantity of watery fluid, or a little milk, may be squeezed out of them. This latter symptom, in a *first* pregnancy, is valuable, and can

generally be relied upon as conclusive that the woman is pregnant. It is not so valuable in an *after* pregnancy, as a *little* milk might, even should she not be pregnant, remain in the breasts for some months after she has weaned her child.

The veins of the breast look more blue, and are consequently more conspicuous than usual, giving the bosom a mottled appearance. The breasts themselves are firmer and more knotty to the touch. The nipples, in the majority of cases, look more *healthy* than customary, and are somewhat elevated and enlarged; there is generally a slight moisture upon their surface, sufficient, in some instances, to mark the linen.

A dark-brown areola or disc may usually be noticed around the nipple* (Plate 6), the change of color commencing about the second month. The tint at first is light brown, which gradually deepens in intensity, until toward the end of pregnancy the color may be very dark. Dr. Montgomery, who paid great attention to the subject, observes: "During the progress of the next two or three months the changes in the areola are, in general, perfected, or nearly so, and then it presents the following characters: A circle around the nipple, whose color varies in intensity according to the particular complexion of the individual, being usually much darker in persons with black hair, dark eyes and sallow skin, than in those of fair hair,

*"William Hunter had such faith in this sign that he always asserted that he could judge by it alone whether or not a woman was pregnant."—*Signs and Diseases of Pregnancy* (Dr. Tanner.)

light-colored eyes and delicate complexion. The area of this circle varies in diameter from an inch to an inch and a half, and increases, in most persons, as pregnancy advances, as does also the depth of color." The dark areola is somewhat swollen. "There is," says Dr. Montgomery, "a puffy turgescence, not only of the nipple, but of the whole surrounding disc."

Women who have had large families, seldom, even when they are not *enciente*, lose this mark entirely; but when they are pregnant, it is more intensely dark—the darkest brown—especially so with brunettes.

A fourth symptom is *quickening*. This generally occurs about the completion of the *fourth* calendar month; frequently a week or two before the end of that period, at other times a week or two later. A lady sometimes quickens as early as the *third* month, while others, although rarely, quicken as late as the *fifth*, and *in very rare cases*, the *sixth* month. It will therefore be seen that there is an uncertainty as to the period of quickening, although, as I before remarked, the *usual* period occurs at four and a half months—or when the pregnancy is half completed.

Quickening is one of the most important signs of pregnancy, and also one of the most valuable. As a rule, the moment she quickens, she first feels the motion of the child, and at the same time, she increases in size. After this time there is less danger of miscarriage.

A lady at this time frequently either feels faint, or actually faints away; she is often either giddy, sick, or nervous, and, in some instances, even hysterical; although, in rare cases, the precise time of quickening may not be known.

The sensation of quickening is said by many ladies to resemble the fluttering of a bird; by others it is likened to a heaving, beating, or leaping sensation; accompanied, sometimes, with a frightened feeling. These sensations after the first day of quickening usually come on eight or ten times a day, although it may happen for days together that the patient does not feel the movement of the child; or if at all, but very slightly.

Quickening arises from the ascent of the womb into the abdomen. Owing to the increased size there is not room for it below. Another cause of quickening is the child has reached a further stage of development, and has, in consequence, become stronger both in its muscular and nervous structure, and has strength and motion of limbs, powerful enough to kick and plunge about the womb, and thus cause the sensation of quickening. The old-fashioned idea was that the child was not alive until a woman had quickened. This is a mistaken notion, as the fœtus is alive from the very moment of conception.

Flatulence has sometimes misled a young wife to fancy that she has quickened; but in determining whether she is pregnant she ought never to be satisfied with one symptom alone; if so she will fre-

quently be misled. The following are a few of the symptoms that will distinguish the one from the other: In flatulence the patient is small one hour and large the next; while in pregnancy the enlargement is persistent, and daily and gradually increases. In flatulence, on pressing the bowels firmly, a rumbling of wind may be heard, which will move about at will; while the enlargement of the womb, in pregnancy, is solid, resistant and stationary. In flatulence, on tapping the abdomen, there will be a hollow sound elicited, as from a drum, while in pregnancy it will be a dull, heavy sound, as from thrumming on a table. In flatulence, if the points of the fingers are firmly pressed into the abdomen, the wind will move about—in pregnancy they will be resisted by a wall of flesh.

The fifth symptom is, immediately after the quickening, *increased size and hardness of the abdomen.* An accumulation of fat covering the abdomen has sometimes misled a woman to think that she is pregnant.

Increased size and hardness of the abdomen is very characteristic of pregnancy. When not pregnant the abdomen is soft and flaccid; when pregnant, and after quickening, the abdomen, over the region of the womb, is hard and resisting.

The sixth symptom is *pouting or protrusion of the navel.* This symptom does not occur until some time after quickening. During the first two months of pregnancy, the navel is drawn in and depressed. As the pregnancy advances, the navel

gradually comes forward. "The navel according to the progress of pregnancy, is constantly emerging, till it comes to an even surface with the integuments of the abdomen; and to this circumstance much regard is to be paid, in cases of doubtful pregnancy."

The seventh symptom is *emaciation;* the face, especially the nose, is pinched and pointed; the features are altered; the face, as the pregnancy advances, gradually resumes its natural comeliness. Emaciation may, and does occur from other causes besides those of pregnancy; but still, if there is emaciation, together with other signs of pregnancy, it tends to confirm the patient in her convictions that she is *enciente.*

Many a plump lady tells of her pregnancy by her sudden emaciation. There is one comfort, however, for as soon as the pregnancy is over, if not before, the body usually regains its former plumpness.

The eighth symptom is *irritability of the bladder* which is, sometimes, one of the early signs of pregnancy. It is, likewise, frequently one of the early symptoms of labor. The *irritability of the bladder,* in early pregnancy, is oftentimes very distressing and very painful—the patient being disturbed from her sleep several times in the night to urinate —passing generally but a few drops at a time. This symptom usually leaves her as soon as she has quickened; to return again—usually without pain —just before the commencement of labor.

There is very little to be done in such cases, in the way of relief. One of the best remedies is,—a small teaspoonful of Sweet Spirits of Nitre (Sp. Æther. Nit.) in a wine-glass full of water, taken at bed-time. Drinking plentifully, as a beverage, of barley water with best gum arabic dissolved in it —half an ounce of gum to every pint of barley water—the gum arabic being dissolved in the barley water by putting them both in a saucepan over the fire, and stirring the while until the gum is dissolved. This beverage may be sweetened according to taste.

Sleepiness, *heartburn*, *increased flow of saliva* (amounting, in some cases even to *salivation*), *toothache*, *loss of appetite*, *longings*, *excitability of mind*, *liver or sulphur colored patches on the skin*, and *likes* and *dislikes* in eating,—any one of these symptoms may accompany pregnancy; but as they often arise from other causes, they are not to be relied on further than this—that if they attend the more certain signs of pregnancy, such as cessation of the menses, morning sickness, pains and enlargement of the breasts, the gradually darkening brown areola or mark around the nipple, etc., they will then make assurance doubly sure, and a woman may know certainly that she is pregnant.*

Sleepiness often accompanies pregnancy, the pa-

*This work is exclusively intended for the perusal of wives. I beg, however, to observe that there is one sign of pregnancy which I have not pointed out, but which to a medical man is very conclusive: I mean the sounds of the fœtal heart, indicated by the stethoscope, and which is for the first time heard somewhere about the fifth month. Moreover, there are other means besides the stethoscope known to a doctor, by which he can with certainty tell whether or not a woman is pregnant, but which would be quite out of place to describe in a popular work of this kind.

tient being able to sleep in season and out of season.

Heartburn.—Some women in pregnancy are much *afflicted* with heartburn; for *affliction* it assuredly is; but heartburn as a rule, although very disagreeable, is rather a sign that the patient will go her time. Heartburn is very amenable to treatment, and is generally much relieved by ammonia and soda—a prescription for which will be found on page 109.

Increased flow of saliva is sometimes a symptom of pregnancy, amounting, in rare cases, to regular salivation—the patient being, for a time, in a pitiable condition. It lasts usually for days; sometimes even for weeks, and is most disagreeable, but is not at all dangerous.

Toothache is a frequent sign of pregnancy—pregnancy being often very destructive to the teeth—destroying one with every child!

Loss of Appetite.—Some women have, more especially during the early months of pregnancy—wretched appetites; they loathe their food, and dread the approach of meal-times. Others, on the contrary, eat more heartily during pregnancy than at any other period of their lives—they are absolutely ravenous, and can scarcely satisfy their hunger!

The longings of a pregnant woman are sometimes truly absurd; but, like almost everything else, it grows upon what it is fed. They long for roast pig, for pork, raw carrots, raw turnips, raw

meat--for anything and for everything that is unwholesome, and which they would at any other time loathe and turn away from in disgust. The best plan of treatment to adopt, is not to give way to such longings, unless they are of a harmless, simple nature, in which case they will soon pass away.

Excitability of mind is very common in pregnancy, more especially if the patient is delicate; indeed, excitability is a sign of debility, and requires plenty of good nourishment, but few stimulants.

Likes and dislikes in eating are of frequent occurrence—particularly in early pregnancy—more especially if the patient has naturally a weak digestion. If the digestion is weak she is sure to have a disordered stomach—one following the other in regular sequence. A little appropriate medicine will rectify the evil, and improve the digestion, and thus do away with likes and dislikes in eating.

Liver or sulphur colored patches on the skin—principally on the face, neck, and throat—are telltales of pregnancy, and to an experienced matron, publish the fact that an acquaintance, thus marked, is *enciente*.

Clothing.—Some women to hide their pregnancy from their friends and acquaintances, screw themselves up in tight stays and in tight dresses. This is not only foolish, but it is dangerous, and may cause either a miscarriage, a premature labor, a cross-birth, or falling of the womb.

A pregnant woman ought on no account to

wear tight dresses, as the child should have plenty of room. She ought to be, as *enciente* signifies, *incincta*, or unbound. Let the clothes be adapted to the gradual development, both of the abdomen and the breasts.

"*Tight lacing* is the chief cause of infantile mortality. That it inflicts the very worst forms of ruin on woman and offspring, is self-evident. No evil equals that of curtailing this maternal supply of breath; nor does anything do this as effectually as tight lacing. If it were merely a female folly, or if its ravages were confined to its perpetrators, it might be allowed to pass unrebuked; but it strikes a *deadly blow* at the very life of the race. By girting in the lungs, stomach, heart, diaphragm, etc., it cripples every one of the life-manufacturing functions, impairs the circulation, prevents muscular action, and lays siege to the child-bearing citadel itself. By the value of abundant maternal vitality, air, exercise and digestion, is this practice murderous to both. It often destroys germinal life before or soon after birth, by most effectually cramping, inflaming and weakening the vital apparatus and stopping the flow of life at its fountain head. It slowly but surely takes the lives of tens of thousands before they marry, and so effectually weakens and diseases as ultimately to cause the death of millions. No tongue can tell, no finite mind conceive the misery it has occasioned nor the number of deaths directly and indirectly of young women, bearing mothers, and weakly infants it has

occasioned ; besides the millions upon millions it has caused to drag out a short but wretched existence. If this murderous practice continues another generation, it will bury all the middle and upper classes of women and children and leave propagation to the coarse-grained, but healthy, lower classes. Most alarmingly has it already deteriorated our very race in physical strength, power of constitution energy and talents. Let those who had rather bury than raise their children, marry tight lacers."

The great thing is for a mother to begin from the beginning, and never allow her daughter to wear corsets at all, in which case these painful consequences could not possibly ensue. If stays had never been invented, how much misery, deformity, disease, and death might have been averted! Another crying evil is that of wearing the underclothing suspended around the hips. It is of vital importance that the full weight of all clothing worn should be borne wholly by the shoulders. If suspended around the waist the weight falls directly upon the bowels, pressing them downward, and as we shall see in another chapter, crowding them against the rectum, and thus causing constipation. Not only this, but the womb must suffer severely from the pressure thus brought to bear upon it, and to this cause as well as to tight lacing is due the numerous disorders and displacements of this organ. If this is true when the womb is of normal size, how much more injur-

ious must be the effect in pregnancy, in which condition each day increases the size, causing it to push upward and outward and continually to demand more room. There should be no bands about the hips, but in place of them the under-garments should be made continuous from the shoulders and so loose that they would fall over the hips, if not supported from the shoulders. Beneath this chemiloon the Jersey fitting combination suit may be worn. "Skirt supporters" will keep the skirts in position, or better still, one of the numerous forms of "hygienic waists" may be used, to which the skirts may be buttoned. These answer the purpose of the corset, giving a neat and trim appearance to the figure and at the same time allowing full freedom to the waist and increasing abdomen.

Bathing.—A *warm* bath in pregnancy is too relaxing. A *tepid* bath once a week is beneficial. Sponging the whole of the body every morning with lukewarm water may with safety and advantage be adopted, gradually reducing the temperature of the water until it is quite cool. The skin should, with moderately coarse towels, be quickly but thoroughly dried.

A sitz-bath ought *every morning* to be used. The patient should first sponge herself, and then finish up by sitting a few seconds in the water. It is better not to be long in it; it is a slight shock that is required, which, where the sitz-bath agrees, is immediately followed by an agreeable glow of

the whole body. If the bath is prolonged beyond the right time, the patient becomes chilled and tired, and is very likely to catch cold. She ought, until she becomes accustomed to the cold, to have a dash of warm water added; but the sooner she can use *quite cool* water, the better. While sitting in the bath, either a woolen shawl or a small blanket should be thrown over the shoulders. The patient *will find the greatest comfort and benefit from adopting the above recommendation.* Instead of giving, it will prevent cold, and it will be one of the means of warding off a miscarriage, and of keeping her in good health.

If cold water does not agree, tepid water may be used. Indeed, during the last few days of pregnancy, and in the early stages of labor, the water for the sitz-bath should be *warm*, and a *warm* vaginal douche, by means of a fountain syringe, should be taken in connection. Care should be used that the water is not too hot; the temperature should be about the same as that of the body. In hard and lingering confinements, *hot sitz-baths* should be taken. There is nothing that tends to soften and relax the parts and make dilation easy and painless as does the application of warm or hot water. The most beneficial results can but follow if the above advice is carefully heeded. Shower baths give too great a shock, and should not be taken.

Air and Exercise.—A young wife, in her *first* pregnancy, usually takes *too long* walks. This is a common cause of *flooding*, of *miscarriage*, and of

falling of the *womb*. As soon as a woman has the *slightest suspicion* that she is pregnant, she must be careful in taking exercise.

Although *long* walks are injurious, she ought not to run into an opposite extreme—short, gentle, and frequent walks during the whole period of pregnancy cannot be too strongly recommended; indeed, a pregnant woman ought to live half her time in the open air. Fresh air and exercise prevent many of the unpleasant symptoms attendant on that state; they keep her in health, tend to open the bowels, and relieve that sensation of faintness and depression so common and distressing in *early* pregnancy.

Exercise, fresh air and occupation are essentially necessary in pregnancy. If they are neglected, hard and tedious labors are likely to ensue. The easy and quick labors and rapid recoveries of poor women are greatly due to the abundance of exercise and of occupation which they are both daily and hourly obliged to get through. Many a poor woman thinks but little of confinement, while a rich one is full of anxiety about the result. Let the rich lady adopt the poor woman's industrious and abstemious habits, and labor need not then be looked forward to, as it frequently now is, either with dread or with apprehension.

Stooping, lifting of heavy weights, and overreaching, ought to be carefully avoided. Running, horseback riding and dancing, are likewise dangerous—they frequently induce a miscarriage.

Indolence is most injurious in pregnancy. It is impossible for a pregnant woman, who is reclining all day on a sofa or an easy chair, to be strong; such a habit is most enervating to the mother, and weakening to her unborn babe. It is the custom of some women, as soon as they become pregnant, to treat themselves as confirmed invalids, and to lie down, in consequence, the greater part of every day. This plan instead of being refreshing, is exceedingly depressing. The only time to lie down is occasionally in the day—when absolutely needing the refreshment of rest.

A woman who, during the greater part of the day, lounges on a sofa or an easy chair, and seldom walks out, has a much more lingering and painful labor than one who takes moderate and regular open-air exercise, and who attends to her household duties. An active life is the principal reason why the wives of the poor have such quick and easy labors, and such good recoveries; why their babies are so rosy, healthy and strong, notwithstanding the privations and hardships and poverty of the parents.

Bear in mind that a lively, active woman has an easier and quicker confinement, and a finer race of children, than one who is lethargic and indolent. Idleness brings misery, anguish and suffering in its train, and particularly affects pregnant women. Oh, that these words would have due weight, then this book will not have been written in vain! The hardest work in the world is having nothing to do!

Woman sometimes look upon pregnancy more as a disease than as a natural process; hence she treats herself as though she were a regular invalid, and unfortunately, she too often makes herself really one by improper and foolish indulgences.

Ventilation.—Let every woman look well to the *ventilation* of her house; let her take care that every chimney is unstopped, and during the daytime that every window in every unoccupied room is thrown open. Where there is a skylight at the top of the house, it is well to have it made to open and shut, so that in the daytime it may, winter and summer, be always open. Nothing so thoroughly ventilates and purifies a house as an open skylight.

My firm belief is, that if more attention were paid to ventilation—to thorough ventilation—childbed fever would be an almost unknown disease. The cooping-up system is abominable; it engenders all manner of infectious and loathsome diseases, and not only engenders them, but feeds them, and thus keeps them alive. There is nothing wonderful in all this, if we consider, but for one moment, that the exhalations from the lungs are poisonous. The lungs give off carbonic acid gas (a deadly poison), which, if it is not allowed to escape, must be breathed over and over again. If the perspiration of the body (which in twenty-four hours amounts to two or three pounds!) is not permitted to escape from the apartment, it must become fœtid—repugnant, sickening, and injurious to the health. The

nose is a sentinel, and often warns its owner of approaching danger!

The Almighty has sent bad smells for our benefit to warn us of danger! If it were not for an unpleasant smell, we should be constantly running into destruction! How often we hear of an ignorant person using disinfectants and fumigations to deprive drains and other horrid places of their odors; as though, if the place could be robbed of its smell, it could be robbed of its danger! Strange infatuation! No; the frequent flushing of drains, the removal of nuisances, cleanliness, a good scrubbing of soap and water, sunshine, and the air and winds of heaven, are the best disinfectants in the world! A celebrated and eccentric lecturer in surgery—Abernathy—in addressing his class, made the following quaint and sensible remark: "Fumigations, gentlemen, are of essential importance; they make so abominable a stink, that they compel you to open the windows and admit fresh air."

To destroy the smell is not to destroy the danger; certainly not! The right way to do away with the danger is to remove the cause, and the effect will cease. Flushing a sewer is far more efficacious than disinfecting one. Soap and water, the scrubbing brush, sunshine and thorough ventilation, each and all are far more beneficial than either permanganate of potash, chloride of zinc, or chloride of lime. People in these times think too much of disinfectants, and too little of removal of causes; they think too much of artificial, and too little of natural means.

Not only is the nose a sentinel, but pain is a sentinel. The sense of pain is necessary to our very existence; we should, if it were not for pain, be constantly falling into many great and grievous dangers; we should, if it were not for pain, be running into the fire and be burned; we should, if it were not for pain, swallow hot fluids and be scalded; we should, if it were not for pain, be constantly letting things go the wrong way, and be suffocated; we should, if it were not for pain, allow foreign substances to enter the eye, and be blinded; we should, if it were not for pain, be lulled to a false security, and allow disease to go unchecked and unattended, until we had permitted the time to pass by when remedies were of little or no avail. Pain is a sentinel, and guards us from danger; pain is like a true friend, who sometimes gives a little pain to save a greater pain; pain sometimes resembles the surgeon's knife, it gives pain to cure pain; sense of pain is a blessed provision of nature, and is designed for the protection, preservation, and prolongation of life!

What we want is a little less theory, and a great deal more common sense.

Contagious diseases are bred and fed in badly-ventilated houses. Ill-ventilated houses are hot-beds of disease. "A small basket of charcoal should be placed in the room, and even in the bed, of every invalid, in order that it may absorb the carbonic acid gas floating in the air, thus rendering the atmosphere purer and more whole-

some." Contagion is subtle, quick, invisible and inscrutable—tremendous in its effects; it darts its poison like a rattlesnake, and instantly the body is infected, and the strongest giant suddenly becomes as helpless as the feeble infant.

Not only should the ventilation of the house be well looked after, but it ought to be ascertained that the *drains* are in good and perfect order, that the privies are frequently emptied of their contents, and that neither drain fluid nor privy fluid communicates, in any way whatever, with the supply of drinking water. Bad drainage and overflowing privies are fruitful sources of child-bed fever, gastric fever, scarlatina, diphtheria, cholera, and a host of other infectious, contagious and dangerous diseases. It is an abominable practice to allow dirt to fester near human habitations.

Drain poison is so instantaneous in its effects, so subtle in its operations, so deadly in its consequences, so untiring in its labors—working both day and night—that it may well be said to be "the pestilence that walketh in darkness," and "the sickness that destroyeth in the noon-day."

Look well to the purity of the *well water*, and ascertain that no drain either enters, percolates, or contaminates it in any way whatever. If it should do so, disease, such as cholera, diarrhœa, dysentery, diphtheria, scarlet fever or gastric fever, will, as a matter of course, ensue. If there is the slightest danger or risk of drain contamination, whenever it is practicable, let the drain be taken

up and examined, and the defect carefully rectified. When it is impracticable to have the drain taken up and examined, then *always* boil the water before using. The boiling of water, as experience teaches, has the power either of destroying or making innocuous the specific organic fæcal life poison, which propagates in drain contamination the diseases above enumerated.

The water from the drive well is far superior to water from the old pump well; the water from the former is always pure, while from the latter it is usually most impure—it is oftentimes little better than water from a cesspool, being contaminated either with drainage impurities, fæcal matter, or water from land springs. I should advise my friends who are about building houses, to sink the drive well, and have nothing to do with the antiquated pump, which is both a nuisance and a danger; indeed, impure water is one of the most frequent causes of diphtheria, scarlet fever, dysentery, cholera, and gastric fever. The pump, in fifty years hence, will be what stage coaches are now, things of the past—a curiosity!

Necessity of occasional rest.— A pregnant woman ought to lie down frequently during the day. This, if there is either a bearing-down of the womb or a predisposition to miscarry, will be particularly necessary. I should recommend this plan throughout the whole period of pregnancy; in the early months to prevent a miscarriage, and in the latter months, on account of the increased weight and size of the womb.

The modern sofas are most uncomfortable to lie upon; they are not made for comfort, but for show; one of the good old-fashioned sofas should be selected for the purpose, in order that the back may be properly and thoroughly rested.

There is, occasionally, during the latter months, a difficulty in lying down—the patient feeling each time a suffocating sensation. When such is the case, she ought to rest upon the sofa, and be propped up with cushions. I consider rest at different periods of the day necessary and beneficial. If there is any difficulty in lying down at night, a bed-rest, well covered with pillows, will be found a great comfort.

Sleep.—The bedroom ought, if practicable, to be large and airy. Particular attention must be paid to the *ventilation.* The chimney should on no account be stopped. The door and the windows ought in the daytime to be thrown wide open, and the bedclothes should be thrown back, that the air might, before the approach of night, well ventilate them. Pure air and a frequent change of air is quite necessary.

The bed must not be loaded with clothes, more especially with a *thick* coverlet. If the weather is cold, let an *extra* blanket be put on the bed, as the perspiration can permeate through a blanket when it cannot through a *thick* coverlet. The knitted, for the summer, are the best, as they allow the perspiration from the body to escape; and the eider-down, for winter, are light, warm, and ventilating.

It is a marvel how some people, with four or five blankets, and with a thick coverlet on the bed, can sleep at all; their skins and lungs are smothered, and are not allowed to breathe, for the skin is as much a breathing apparatus as are the lungs themselves. This is a mistake, and fraught with serious consequences!

The bedroom, at night, should be dark; hence the importance of either shutters, Venetian blinds or dark blinds impervious to light, or thick curtains to the windows. The chamber too, should be as far removed from noise as possible—noise is an enemy to sleep.

The pregnant woman is sometimes restless at night—she feels oppressed and hot. The best remedies are:—(1.) Scant clothing on the bed. (2.) The lower sash of the window, during the summer, to be left open six or eight inches, and during the winter, two or three inches; providing the room is large, the bed is not too near the window, and the weather not intensely cold. If any or all of these latter circumstances occur, then (3) the window should be closed and the door left ajar. (4.) Attention should be paid to the bowels if costive—but not otherwise. (5.) Stimulants of all kinds are to be avoided. (6.) Gentle walking exercise. (7.) Sponging the body every morning—in the winter with *tepid* water, and in the summer with *cold* water. (8.) Cooling fruits, in summer, are in such cases very healthful and refreshing.

Pains at night, during the latter months of preg-

nancy, are usually frequent, so much so as to make an inexperienced woman think her labor at hand. Apply "Stimulating Liniment,"—which can be procured at any drugstore,—and keep the bowels covered with warm, dry flannels. If they are violent, a physician should be called.

A pregnant woman should retire early. She ought to be in bed every night by ten o'clock, and should make a point of rising early in the morning, that she may have a thorough bath, a stroll in the garden, and an early breakfast. Afterward a short walk should be taken while the air is pure and invigorating. But how often, more especially when a lady is first married, is an opposite plan adopted. The importance of bringing a healthy child into the world, if not for her own and her husband's sake, should induce a wife to attend to the above remarks.

While some women during pregnancy are very restless, others are very sleepy. They can scarcely even in the day, keep their eyes open! Fresh air, exercise, and occupation, are the best remedies for this.

CHAPTER V.

CONSTIPATION.

Constipation means a sluggish state of the bowels, by reason of which the fæces are retained for a longer time than is warranted in a state of health. The discharges are hard and dry, in small quantities, and evacuated with difficulty. This is one of the most common disorders to which mankind is subject, and among pregnant women is almost universal.

This subject is one which should engage the earnest attention of every woman. The results of constipation are far more serious than are generally supposed.

The retained excrement is, to a certain extent, absorbed into the system and acts as so much poison, to eliminate which the other organs are overtaxed, causing debility of the whole system. Women who were never of costive habit are liable to become so in pregnancy, and those who were subject to it before may become so much worse now as to be unable to have a healthy evacuation without the interference of mechanical or medicinal means.

It has been asserted that there is not a disease

of the human system which cannot be traced to this one trouble. While this may not be true, the evil effects which it produces in pregnancy are too well known to need comment, and any suggestions or treatment that will alleviate, cure or remove the causes, should be eagerly sought and carefully followed. In order to understand why constipation is so constant an attendant upon pregnancy, the subject should be carefully studied by the patient.

The nutriment derived from the food is taken into the blood from the stomach and small intestines, while the residuum—comprising the larger part of all the food—passes into the large intestine, called the colon. Beginning on the right side of the body just above the pelvis, the colon passes *upward* to the lower border of the ribs, then crosses the body and descends on the left side, and inward to the spinal column, where it merges into the rectum.

"The bowels possess what is termed peristaltic action, that is, each portion alternately relaxes and contracts, thus forcing the food through them. The passage of the food is more rapid through the small intestines than through the colon which, by its large size and slow motion, allows the greater part of the waste material, or fæcal matter, to accumulate in it. While this remains in the colon it occasions no inconvenience, but as soon as it passes into the rectum it causes a desire to evacuate the bowels."

The time of passage from the colon to the rectum varies in different individuals—some requiring two evacuations daily to a perfect state of health, others—and the great majority belong to this class—require but one, while a third class evacuate the bowels but once in two days. In determining whether the bowels are costive the state of the evacuations, as well as the frequency, should be taken into consideration. If they are scanty, dry, hard, and attended with pain, constipation is present, even though the evacuations are of daily occurrence. As a rule it may be stated that there should be a full, free, soluble and satisfactory evacuation of the bowels daily, and not for one day, especially in pregnancy, should this rule be broken, or constipation allowed.

Causes.—Sedentary habits, particularly where the mind is closely applied to any subject; the continued use of laxative medicines; the habitual neglect of the bowels, so common among women; the mechanical pressure which the womb, in its enlarged condition, exerts upon the rectum; errors in diet, and especially errors in dress.

In nearly all forms of constipation there is a lack of contractile power in the colon and the rectum. This is due largely to want of proper exercise. Many a pregnant woman does not leave the house. From the date of conception she is a fixture. Can it be wondered that in such cases constipation should be the result? Exercise in the open air, occupation and household duties are the best med-

icines known for constipation. Every step taken in walking, and every bending or twisting motion of the body by jarring and crowding the intestines, assists them in their work. Intense mental application should be avoided. Any continued strain upon the nervous organization takes away the nerve stimulant, essential to digestion and assimilation.

In speaking of the effects of exhaustive mental occupation, Dr. Jackson says:

"It is not the man or woman who lives regularly, eats temperately, and exercises the brain moderately, or even severely, if the habits are correct, and sufficient outdoor air and exercise are had to oxygenize the blood and keep up muscular tone; it is not the muscle-worker, the agriculturist, the mechanic, the machinist; it is not the maid of all work, as a general thing; it is the brain worker —the lawyer, merchant, doctor, banker, minister, teacher; it is the man who sits in his office or works in his store or shop in poor air and light, having little or no muscular exercise, who constantly thinks, is anxious, worried, careworn—a victim of the intense competition and excitement which modern business life imposes; it is the wife and mother who lives in the house all day, who is continually worried by household cares and anxieties, who is *socially* taxed and excited; it is she who idles away her time, passing it in indoor indolence, who dresses unphysiologically, eats badly, feeds upon sensational literature, and lives under the reign of her emotional and passional nature;

it is the poor factory girl or seamstress plodding away through weary days, in stifling air and on starvation diet, as of baker's bread and tea, debarred from all outdoor recreation ; or the school-teacher, who barely earns her living, though she works brain and nerves almost daily to the point of exhaustion. In these classes, subject to unphysiological habits of work, want of recreation, unfavorable surroundings, irregularity in eating, sleeping, etc.—more from lack of knowledge than from necessity—are found the victims."

Laxative medicines should always be avoided when possible. Sometimes it becomes necessary to give a purgative, but when this is the case the mildest should be chosen. Strong purgatives are highly improper, and often very dangerous. Especially is this the case where the patient is liable to miscarry.

"Cathartic drugs all depend for effect upon a certain quality they possess of exciting secretion and peristaltic activity. Of course they do this through the nervous system, few, if any, of them being mechanical in their action, but accomplishing their results by stimulating the nervous system to extra effort. In doing this they necessarily exhaust the source of supply, for the tendency of all stimulation is to induce exhaustion, as the consequence of unnatural exhibitions of nervous force. Persons using these so-called remedies—laxatives, cathartics and purgatives—thus securing the movements of the bowels in the present, find that after

their use it is more difficult to secure natural passages, and that the doses must be increased to produce any effect. Meantime the continued use of these drugs not only exhausts nervous force, but often creates inflammation of mucous surfaces, disturbing digestion and poisoning the blood."

Habitual neglect of the bowels is one of the most frequent causes of constipation. The rectum is naturally empty. As soon as the fæces are discharged into it there is usually a desire to relieve the bowels. If this is not done at once or if neglected for a short time the fæces are carried upward by peristaltic motion and back into the colon. The desire for evacuation thus passes away. This abuse long continued causes the bowels to become clogged up, they lose their contractile power, the sensibility is destroyed, and in time the natural desire to relieve them will not be felt. This allows an accumulation which distends the rectum and even the colon far beyond their natural capacity. The rectum in its enlarged condition presses against the womb, causing debility and almost certain disease of that organ. To this cause, too, may be attributed much of the nausea accompanying pregnancy. Piles follow as a necessary consequence of pressure on the hemorrhoidal veins. Bearing-down pains, pains in the back, flatulence, colic, swelling of the veins of the legs, headache, sleeplessness, miscarriage and many other diseases are the result of over distension of the bowels. Among women this habit of neglect is almost uni-

versal. An evacuation of the bowels is looked upon as an onerous duty, avoided as long as possible, then performed in a hurried and imperfect manner. Women who are occupied in stores, offices or factories, where they are surrounded by men, often, through a sense of false modesty, fail to heed the demands of nature. The retention of the urine beyond the time when it should be voided is a serious evil. Continued distension causes the walls of the bladder to relax and to lose their elasticity. In its enlarged state the bladder presses against the womb in much the same manner as the over-distended rectum, and usually with the same evil result. The sensitive womb, placed as it is between the rectum and the bladder, is peculiarly liable to suffer from want of attention to either of these organs. The inconvenient, repulsive and often dangerous closet accommodations, usually provided in the country and smaller towns, tends to increase the natural aversion to promptly heed the demands of nature. This is usually placed some distance from the house, and constructed so openly as to expose the inmates to the rain in summer and snow and ice in winter. During the monthly period such exposure is exceedingly dangerous and it is little wonder that the sensitive or invalid woman dreads the ordeal and defers the same as long as possible. Earth closets should be constructed to take the place of the noisome accommodations now so common. These can be made at a trifling cost, and will answer the pur-

pose where the more modern and expensive form cannot be secured. The outhouse may be built close against the dwelling, or a convenient corner in a warm woodshed may be utilized for this purpose. Beneath the seat, a large galvanized pail should be placed, the bottom of which should be well covered with fine ashes or dry dirt. After using the closet, a supply of ashes or dirt—which may be kept in a convenient place and handled by means of a small shovel—should be added to the contents of the pail. The latter should be emptied and thoroughly cleansed daily. When these directions are carried out, such a closet may be placed near or even in a house with perfect safety.

Among delicate women the pregnant womb is often a cause of constipation. At the same time to constipation is due many of the serious disorders of the womb. This will be readily understood when it is seen that the enlarging womb—especially in cases of retroflection—presses against the rectum, causing a collapse of that organ and thus preventing the escape of the fæcal matter. The result is that the weight of the matter thus accumulated presses upon the womb and tends to drag it down. In such cases all straining at stool has the same tendency, and should be carefully avoided.

The quality and quantity of the food taken has much to do with a healthy state of the bowels. They may become inactive from the use of very

nutritious food. The concentrated forms of food, such as meat and the various preparations of fine flour, which have little waste but go almost entirely to the blood, give the bowels but little to do and they become constipated from want of use. Hot biscuits, rolls, pancakes, and muffins are not healthful and should not be eaten. Cakes, condiments, rich pies and all confections are too concentrated. Fat meats, dried and salt meats, veal, geese and ducks, and other gross meats are constipating.

In a previous chapter I have referred to the pernicious effects of fashionable dress upon the generative organs. This is also one of the serious causes of constipation. Not only is this caused by lacing and by suspending the clothing around the waist, but by the inequalities of the clothing worn. The dress of the lower portion of the body is much less in proportion than that of the upper half, and the putting on of an extra skirt does little to increase the warmth. The cold air must necessarily get under the skirts, and the warmer the body the quicker the air will rush up. In this way the temperature of the body from the waist down is kept several degrees lower than from the waist up. Every one knows that cold contracts the skin, veins and arteries, and propels the blood from the surface. Put your hand in ice water for a few moments and you will see it shrunk and colorless; the blood has been driven from it. This process is going on all the time where the dress is

less in one part of the body than in another. In the coldest part the circulation becomes slower as the blood is driven away. Worse still, the blood is driven to other parts of the body where it is not wanted, where it clogs up and causes passive congestion. The bowels, like the stomach, have their function to perform in digestion; they require the same amount of animal heat, they also require unobstructed circulation. To expose the surface of the abdomen, causes great evaporation of needed heat; the digestion, robbed of its heat, its operation interfered with, becomes gradually slower, all its functions slower and delayed, the consequence is serious, and constipation is the result. The reason why men are not so constipated as women is largely due to the fact that their dress keeps the whole of the body of an equal temperature, and the circulation unimpeded.

Treatment.—It will readily be seen from the preceding that the treatment should be one of prevention rather than of cure. The same means, however, that will prevent constipation, if intelligently carried out, will usually effect a cure. Regularity in the habits is one of the most important points of treatment. The first effort should be to re-establish the natural habit of the bowels. The desire for food recurs at regular hours each day because it is customary to eat at certain times. In like manner a habit of the body may be established, by which a desire to evacuate the bowels will follow at a given hour. It is not to be expected

that this result can in all cases be attained in a day, a week, or even in a month Obstinate cases of constipation require *time* in which to restore the normal function of the rectum, but the end accomplished is worth much more than the effort expended.

"A new habit cannot be formed or an old one altered, without persevering effort in the right direction. The patient who is earnest in the search for health, should be encouraged to persevere for months in going to the water-closet without fail, once every day, at a certain hour, as regularly as the clock points to it. This is indispensable to a correction of the bad habit of constipation. A very effectual part of this regular endeavor is to cause the mind to dwell upon the necessity of an evacuation and the process itself, for at least half an hour before retiring to the proper place. It is not a difficult matter with many persons to create a desire in this way. Let no consideration of convenience enter into this punctual effort at stool. Once in the proper place the position should be an easy one, no inconvenient strain upon any muscle should be allowed, and the patient should be possessed with an entire sense of leisure, to perform the act completely. The value of all these considerations, where faithfully followed, is incalculable, and very few cases can long resist them. Without them medicine will only temporarily relieve. instead of permanently curing, obstinate cases. Another matter of great importance, when

an effort is made to have an evacuation, is to have the abdomen distended with food. The patient should eat plentifully of vegetable diet, such as is by its bulk calculated to produce fullness. If the patient goes to the water-closet with a sense of fullness of the abdomen, success will be much more likely to follow. Should the regular time for making an effort be soon after breakfast, which is undoubtedly the best time, and the meal has not been sufficient to produce a sense of moderate distension, a full glass of water will complete that condition. The various kinds of fruits may be used for this purpose, such as ripe, mellow apples, without being divested of the rind, prunes, figs, the different kinds of berries, and tamarinds. The acids of these fruits increase the secretions of the intestines, while the rind and seeds, beside distending the bowels, increase their peristaltic action. Very acid fruits, as lemons and oranges, produce their effect only on account of the acids which they contain. They are excellent in the case of patients whose stools are dry, hard and lumpy."

The above treatment cannot be too faithfully followed. The character of the food, as has been stated, exerts much influence upon the action of the bowels. I would recommend the patient to eat freely of fruits of all kinds. Make fruit a part of the everyday bill of fare, eat it in abundance, and constipation will usually vanish with no other treatment. It is also important that the food eaten should be bulky in its nature. The stomach

and intestines are like rubber and contract on themselves. The stomach is full whether little or much food has been taken, and the same is true of the intestines. If the food is too concentrated, it is largely absorbed and there is not enough remaining to require a vigorous action of the bowels. The residue is also compact, dry and hard. A diet composed largely of fruits and vegetables seems to meet the wants of those of costive habits. Such food contains enough nutriment to support the body in health, and at the same time contains enough liquid to keep the residue in a soluble state. Among the fruits, peaches, plums, prunes, muscatel raisins, figs, grapes, pears, apples and the small fruits of all kinds are to be recommended. They should be well cooked and eaten at meal time, or if sound and ripe they may be eaten raw. Of vegetables, turnips, squash, tomatoes, cabbage, asparagus, lettuce, rhubarb, green corn and cauliflower may especially be used to advantage.

Nothing is so important as the bread that is eaten. With many this one item forms a large proportion of all the food that is taken. It is imperative then that it should be such as will not cause constipation. Bakers' bread should not be eaten, as it is almost sure to have an astringent effect. The same is true of the bread made from the fine white flour in common use. Bread made from Graham flour has been highly recommended, but on account of its coarseness, is not easily digested, it is far preferable, however, to white bread.

When it can be obtained, flour made from the *entire wheat* should be used. In the entire wheat flour, the gluten is preserved; this makes bone and muscle, cures constipation, and is much richer in flavor than the ordinary white flour. Cake and pies made from this flour—if they must be had—are much more wholesome. This flour is now made in different parts of the country, and can usually be easily obtained. Rye and Indian meal also make a delicious and wholesome bread. Oatmeal and cracked wheat may also be prepared in various ways which make them loosening to the bowels, and valuable articles of food.

Regularity in the matter of eating should be observed, and the meals must not be taken in a hurried manner. If the food is not mixed with saliva, but swallowed with tea or coffee to wash it down, digestion is retarded. And if the food is eaten too rapidly, more is taken than is sufficient for nutriment. As a result, indigestion and constipation follow. No drink should be allowed at meals, then the gastric juice acts directly on the food and dissolves it much sooner and easier than if weakened by drinks. Tea is likely to have an astringent effect, while coffee, though laxative in its nature, is too stimulating, and the reaction causes torpidity. Water should be freely taken an hour or two before meals, when the stomach is empty. The cells of the stomach will then be filled with a sufficient quantity of gastric juice to easily digest the food when taken. A full glass of water

taken the first thing each morning will frequently keep the bowels in excellent condition, and is so simple a remedy that it should be in more universal use.

The use of the wet compress will in many cases prove beneficial. A napkin should be doubled several times so as to make a thick compress and at the same time large enough to cover the whole of the bowels. This should be wrung out of warm water, placed upon the abdomen and kept in place by a strip of dry flannel cloth. The compress should be applied on going to bed, and should be worn during the night.

The enema is another method which may be employed to advantage where an immediate action of the bowels is desired. A fountain syringe should be used and the reservoir suspended as high as the tube will permit in order to give the water sufficient force. The enema should enter the bowels slowly and should be retained fifteen or twenty minutes. Light massage treatment may follow the enema and after this combination treatment a free evacuation is almost sure to follow. Where inactivity of the rectum is the cause of constipation, injections of cold or tepid water will give tone to that organ and prove of great benefit. After a time, however, the injections lose much of their efficiency, and for this reason too much dependence should not be placed upon them. Should it be necessary to continue their use a little salt or Castile soap may be added to the water with ad-

vantage. If this is not sufficient, then ten grains of ox-gall dissolved in half a pint of tepid water and used as an enema will remove large quantities of hard, impact fæces. Should it be necessary to resort to medicine, a tablespoonful of castor oil may be taken and the bowels thus relieved should be kept free by the use of hygienic measures recommended in this chapter.

An abundance of exercise will not only prevent constipation, but is one of the very best means of treating the same. It is preferable that outdoor exercise be taken where possible, but special indoor exercise may be made to answer the same purpose. To some it may seem that such simple means can be of little value in treating an obstinate disease, but simple as these means are, if patiently and thoroughly carried out, they cannot fail to alleviate, if not completely cure, the most obstinate cases. At the same time, they strengthen the whole body and thus prepare it to the more easily resist all other diseases. Such exercise should be taken as tends to strengthen the muscles of the abdomen, give tone and vigor to the muscular tissue of the bowels, and develop the diaphragm and other respiratory organs. Is it not reasonable to suppose that if the arm of the blacksmith becomes strong by exercise, that any of the muscles of the body may in like manner be strengthened? Exercise quickens the circulation of the blood, the lungs, responding to the rapid flow, require a greater amount of air for oxygenation, and

respiration is quickened to obtain this supply. Every full breath taken imparts strong motion to the diaphragm, which in turn gives action to the contents of the abdomen. Hence the value of full and deep breathing and the corresponding necessity for free, untrammeled dress. An exhaustive treatment of this subject may be found in a volume by Dr. G. H. Taylor, entitled, "Health by Exercise," and from which the following exercises have been adapted. Dr. Taylor says:—It is a curious and most interesting fact that children and young animals, whose desire for motion is inherent, are inclined chiefly to those kinds of exercise, and to assume those positions that necessarily affect the abdominal contents.

It is by such exercises as *climbing*, *rolling*, *crawling*, *jumping* and *playing* generally that these contents are most disturbed. We are convinced that these are the means that nature prescribes to secure healthful development and power in these most essential parts of the body. As if to insure these healthful effects, nature has ordained that by *respiration*, as an efficient and constant means, these motions shall be secured to the alimentary canal. The abdominal contents may be considered as being located between two great muscular organs, the diaphragm and abdominal walls.

These muscles act conjointly and *simultaneously* and upon all the included parts, causing them to play incessantly upon each, and subjecting them to a constant and gentle pressure.

One prime effect of exercise is the increase of the substance and the contractility of the abdominal muscular coverings. The walls of the abdomen become, in the absence of proper exercise, weak, flabby, and unnaturally distended when this occurs, the abdominal contents necessarily obey the laws of gravity, become dislocated and their functions consequently impaired. Well directed movements restore the power of these walls, the sinking organs are reinstated in their original position, and their function is recovered.

A great variety of motions may be given to one's own digestive organs suited to different constitutions, conditions of disease, development of the region, strength of the person, etc. A few forms are selected for the reader's attention, which if not entirely applicable for a given case, may at least prove suggestive of some other that will act more to the purpose.

Position, lying upon a couch, with the shoulders raised and the limbs in an easy position.

Varieties of Action.—*Kneading.*—The two fists strongly clenched may be pressed upon the abdomen so firmly as to cause the subjacent parts to yield before the pressure. This action is to be repeated for several minutes over the whole region of the abdomen.

2. *Shaking.*—The hands are applied to each side of the abdomen, and alternate pressure given to it, producing a somewhat rapid oscillating movement of all the abdominal contents included between the two hands.

3. *Stroking.*—Each hand is applied to the region of the groin, the tips of the fingers nearly meeting, then each hand is to be drawn slowly, with much pressure, upward and outward.

4. *Circular Stroking.*—The pressure of the hands is made to follow the course of the colon, beginning low upon the right side of the abdomen, passing around beneath the stomach, and terminating on the side opposite.

5. *Clapping.*—The extended hands are made to strike any portion of the frontal region of the abdomen. The blows should be given with each hand alternately at such a rate of rapidity and force as to produce no unpleasant sensations. If there is a point where pain is felt, the motion, at each successive application, should for a period be given to surrounding parts, approaching the tender point gradually until the pain disappears. The double fist may be used in place of the flat hand when it can be borne.

All the above massage movements may be applied in the standing position with the trunk a little bent forward or stooping.

6. The patient should be seated upon the edge of a chair or other convenient seat, the position of the thighs at right angles and feet so extended as to form a large base. Raise the arms above the head and parallel to each other. Now, let the body fall slowly forward in a diagonal direction, that is, in a line directly over one thigh, bringing the breast in close contact with the knee. After

this the body slowly resumes its original position. This action may be repeated five or six times on each side. If it seems advisable that less effort should be expended in this movement, the hands may be clasped behind the back instead of raised above the head. If more force is desired a light pair of dumb bells may be held in the hands, and the movement be performed as before.

7. The position of the body the same as in number six, with the exception that it may be necessary to secure the feet to the floor by placing them under some firm object, or they may be held to the floor by another person if more convenient. The trunk is to be twisted a little toward the knee of one side, then allowed to fall slowly backward till it reaches a position approximating the horizontal, where it remains for a few moments. Then raise slowly to first position. This action may be repeated three or four times with each side. This movement calls powerfully into action the muscles of the abdomen upon either side; it also presses the bowels, and has a healthy action upon visceral organs.

8. Position same as in seven. Allow the trunk to fall directly and slowly backward till it reaches a position nearly horizontal, when it slowly returns to the commencing position. This action may be repeated four or five times.

9. Kneel upon the floor, supporting the knees with a cushion, upon which the knees should be placed as far apart as possible. Keep the trunk

perpendicular, and place the hands upon the hips. Bend the trunk above the hips as far to one side as possible. Allow it to return and pass as far to the other side. The motion should be somewhat rapid, so that the momentum may be felt upon the convex side. This action may be repeated ten or twelve times. The movement acts upon muscles of either side as well as upon the spleen, liver and other organs situated in the region affected by the motion as well as upon the abdominal walls and viscera.

10. Seated upon a mattress, with legs extended horizontally, the hands should be placed upon the head. Bend the trunk slowly as far forward as possible. Then return it slowly to its primary position. This action may be repeated five or six times. The movement elevates the ribs, causes the abdominal muscles to contract, and elevates the contents of the abdomen.

11. The trunk lies in a horizontal position, face downward. Lock the arms, and elevate the body so that its weight will rest entirely upon the elbows and toes. The trunk may be held in this position a greater or less time, according to the strength of the patient. The movement may be varied by raising and lowering the hips. This movement presses the contents of the abdomen toward the diaphragm, and often instantly relieves *prolapsus* of any of the pelvic organs, as that of the womb, vagina or rectum, restoring the parts to their natural condition and relation. Indeed, all other

medical applications designed to meet the end here indicated, bear no comparison to this simple movement. By repetition the weak parts are strengthened, and a radical cure is effected.

In closing this chapter I wish to impress upon my reader this one fact, that constipation can be prevented much easier than it can be cured. Let the mother bear this in mind, let her save her child from constipation, and she will save her from a hundred and one disorders that will render her life a life of misery.

CHAPTER VI.

DISEASES OF PREGNANCY.

The Creator never intended that pregnancy should be a source of disease, but ignorance, false modesty, fashion, previously acquired diseases of the womb, errors of regimen and diet, a weak constitution and bad training in girlhood, often lay the foundation of serious troubles during pregnancy.

I consider it necessary to give a brief account of such diseases, and to prescribe a few safe and simple remedies. I say *safe* and *simple* for *active* medicines require skilful handling, and ought not, unless in cases of emergency, to be used except by the advice of a physician.

Mental disorders.—Such are, undefined fear of pending evil, anxiety about the future, and fear of dying, many forebodings and gloom, even to despair. These disturbances, although they may have no cause, are serious in the extreme. It is important to a mother's well being, and to a happy termination of her pregnancy, that these illusions should be conquered. Serious consequences have been produced by an over-wrought imagination. This dark phantom that hangs over the reason of

the already burdened patient should be chased away by gentle reasoning and moral suasion.

To you, husbands, I say, reflect upon the manifold inconveniences and annoyances that your wife must labor under while pregnant. The love which you gave her before the altar—double it now. Think of the suffering that you are spared which she must undergo to give you the delight of paternity. In doubling your attentions, in anticipating her desires, in calming her fears, in soothing her irritations, you do only your duty, though it should also be your highest pleasure. Do it cheerfully; let your devotion spring from a manly heart, from the heart of a true husband. What was a molehill to your wife before must be a mountain now. Smooth her rugged path, shade her from the burning flame of mental agitation, encourage her, inspire her with hope, and when the time comes that she lies prostrated, her face beaming with happiness at the sound of her first-born, thank God that you have been kind to her.

The hygiene in these cases is purely a moral one, and must be conducted by a careful and loving husband, and affectionate relatives or friends. When forebodings and gloom pervade the mind of her who is to become a mother, reasoning may be in vain. In this case, her condition should not be totally ignored, lest offence be given, but unknowingly to her, and apparently unaffected by her fears, simple means may be employed to throw her off the gloomy path of her thoughts. The

wife's tastes and predilections when in health being known, there are a hundred things that can be done to attract her from her sorrow of self into innocent distractions and pleasures. This must be done without an effort or apparent purpose, else the object may be defeated by making her aware that care and kindness are induced by solicitude. Bring home a good book, a favorite fruit, or a mutual friend, with whom you may enter into an innocent conspiracy for her good. Invite her to take a walk, and then do not rush her through an unfeeling crowd, but walk leisurely in a favorite place, call her attention to objects of interest, and even to trifles that may have amused her before. Have some congenial friends at home, a game of whist, or any sort of innocent game and moderate gaiety, a little surprise party of dropping-in friends—some genial, happy faces. If it is necessary, an innocent plot with your friends may be formed to get her out some evening to a social meeting, a lecture, a concert, or a lively, pleasing drama. If the rooms or halls are too hot or crowded, you may show solicitude enough to take her home. Cheerful fireside, unstinted sacrifices, loving sympathy, will rob the mind of many a dark shadow. Change of scene, short, easy journeys to favorite cities or spots, is a source of pleasant and healthy excitement that will invigorate body and mind. Be never weary, and success and happiness will crown your noble efforts.

Muscular pains of the abdomen.—The best rem-

edy is an abdominal belt, constructed for pregnancy, and adjusted to fit the abdomen. It is made with straps and buckles to accommodate the gradually increasing size of the abdomen. This plan often affords great comfort and relief; indeed, in some severe cases, such belts are indispensable.

Diarrhœa.—Although the bowels in pregnancy are generally costive, they are sometimes in an opposite state, and are relaxed. This relaxation is frequently due to continual constipation, and nature is trying to relieve itself by purging. Such being the case, a patient ought to be careful of astringents as they interfere with relaxation. Sometimes nature succeeds; at other times it is advisable to give a mild aperient, such as castor oil, tincture of rhubarb, or rhubarb and magnesia. If castor oil, a teaspoonful swimming on a little new milk, will generally answer the purpose. If tincture of rhubarb, a tablespoonful in two of water. If rhubarb and magnesia are selected, then a few doses of the following mixture will usually set all to rights:—

Take of—Powdered Turkey Rhubarb, half a dram;
Carbonate of Magnesia, one dram;
Essence of Ginger, one dram;
Compound Tincture of Cardamons, half an ounce;
Peppermint Water, five ounces and a half;

Two tablespoonfuls of the mixture to be taken three times a day, first shaking the bottle.

The diet should be simple, plain and nourishing, and should consist of beef tea, of chicken broth, of arrowroot, and of well-made and well-boiled oatmeal gruel. Meat ought not to be eaten; and stimulants of all kinds must be avoided.

If the diarrhœa is attended with pain in the bowels, a flannel bag filled with hot table salt, and applied to the part affected, will afford great relief. A hot water bag, in a case of this kind, is a great comfort.* The patient should, as soon as the diarrhœa has disappeared, gradually return to her usual diet, which ought to be plain, wholesome and nourishing. She should pay particular attention to keeping her feet warm and dry; and, if subject to diarrhœa, she should wear around her bowels, and next the skin, a broad flannel band.

Sleeplessness.—Pregnant women of nervous temperament are often kept awake night after night without apparent cause. This is produced by the slightest mental excitement, or by the motions of the child; again by eating or indulging in a cup of tea or coffee before retiring.

Close confinement to one's room and want of exercise may also be the cause. This may be borne without inconvenience, in case the patient gets some few hours of sleep, and awakes refreshed in the morning. But in some instances the patient suffers severely; does not sleep a minute; becomes feverish, restless and agitated; she loses her appe-

* The hot water bag, or bottle, as it is sometimes called, is composed of vulcanized India-rubber, and is made purposely to hold very hot water. The bag ought not to be more than *half filled* with water, as it will then better adapt itself to the shape of the bowels. The water must be hot but not boiling; if it should be very hot the bag ought to be wrapped in flannel. It is a most delightful stomach warmer and comforter, and should, where there is a family, be in every house. One great advantage of it is, that in a few minutes it is ready for use.

tite, and becomes weak and prostrated, her mind begins to suffer, and she becomes fretful, whimsical, and even irrational.

The treatment consists in sleeping in a well-ventilated apartment,on a hair mattress,taking care that the bed is not overloaded with clothes; a thorough bath every morning, and a good washing with cold water of face, neck, chest, arms and hands every night; shunning hot and close rooms; taking plenty of outdoor exercise; living on a bland, nourishing, but not rich diet; avoiding *meat* suppers, and substituting, in lieu thereof, either a cupful of arrowroot, made with milk, or of well-boiled oatmeal gruel; avoiding stimulants of all kinds; drinking morning and evening *black* tea, instead of coffee; and taking a dose of the following drops in water as prescribed below:

Compound Spirits of Lavender, one dram;
Aromatic Spirits of Ammonia, eleven drams;

A teaspoonful of the drops to be taken every night at bedtime, and repeated in the middle of the night, if necessary,—in a wine-glass of water.

An attack of the fidgets during the night may be relieved by taking a short walk up and down the room; drinking half a glass of cold water; emptying the bladder and turning the pillow, so as to have the cold side next the head, and then lie down again. The chances are that the patient will now fall asleep.

During the day a ride in an open carriage; a stroll in the garden, or in the field; or a little

housewifery, will do her good. There is nothing like fresh air, exercise, and occupation, to drive away the fidgets. It is generally those that have nothing to do who are thus affected. The poor woman who has to work for her daily bread does not know what the fidgets mean. Here again we see the value of occupation—of having plenty to do! Idleness is criminal, and deserves punishment. It assuredly is, and always will be punished!

Heartburn is a common and often a distressing symptom of pregnancy. The acid producing the heartburn is frequently much increased by an overloaded stomach. The patient labors under the mistaken notion that, as she has two to sustain, she requires more food during this than any other time; she consequently is induced to take more than her appetite demands, and more than her stomach can digest; hence heartburn, indigestion, etc., are caused, and her unborn babe, as well as herself, is thereby weakened.

A wholesome diet ought to be strictly observed. Great attention should be paid to the *quality* of the food; greens, pastry, hot-buttered toast, melted butter, and everything that is rich and gross, should be carefully avoided.

Either a teaspoonful of heavy calcined magnesia, or half a teaspoonful of carbonate of soda—the former to be preferred if there is constipation—should occasionally be taken in a wine-glass of warm water. If these do not relieve—the above

directions as to diet having been strictly attended to—the following mixture should be tried:

Sesquicarbonate of Ammonia, half a dram;
Bicarbonate of Soda, a dram and a half;
Water, eight ounces.

To make a mixture.—Two tablespoonfuls to be taken twice or three times a day, until relief is obtained.

Chalk is sometimes given in heartburn, but as it produces constipation, it ought not to be used.

If constipation accompanies heartburn, the heavy calcined magnesia should, as above recommended, be taken in place of either carbonate of soda or the above mixture; the dose being a teaspoonful mixed in a wine-glass of water. The heavy calcined magnesia is preferable to the light carbonate of magnesia,—it mixes smoother and better in water, and is therefore more pleasant to take; it is also stronger—twice as strong as the light carbonate of magnesia; it not only relieves the heartburn, but acts gently and pleasantly on the bowels.

Water-brash.—The patient, in early pregnancy, oft-times suffers from water-brash; indeed, it sometimes accompanies heartburn and morning sickness, and when it does, is very distressing. Water-brash consists of a constant eructation of a thin watery fluid into the mouth—sometimes in very large quantities. The fluid is generally as thin and clear as pure water—in fact, having very much the appearance of water. Occasionally it is acid; at other times, it is perfectly tasteless. This

water-brash frequently disappears after the patient has quickened; at other times, it continues during the whole period of pregnancy, more especially if the patient is dyspeptic. The best remedies for water-brash are charcoal biscuits—one should be eaten at any time the patient is suffering from the flow of water. If the fluid of the water-brash is acid, then the mixture recommended for *heartburn* will be found very serviceable, and should be taken three times a day. A charcoal biscuit should be eaten between times. Water acidulated with a drop or two of nitric or sulphuric acid, or with the juice of a lemon has also been found very useful.

Wind in the stomach and bowels is a frequent reason why a pregnant woman cannot sleep at night. The two most frequent causes of flatulence are the want of walking exercise during the day, and the eating of a hearty supper just before going to bed. The remedies are, in each instance, self-evident. It is folly in either case to give medicines, when avoidance of the cause is the only right and proper remedy. How much physic might be dispensed with if people would only take nature and common sense for their guides; but no, they would rather take a pill—it is less trouble!—than walk a mile; they would prefer a hearty meat supper to sweet and refreshing sleep! What extraordinary tastes some persons have! Luxury and self-indulgence are, alas! the crying evils of the day.

Piles are a common attendant upon pregnancy.

They are small, soft, spongy, dark-red tumors—enlarged veins—about the size either of a bean or of a cherry—sometimes as large as a walnut—and are either within or around the fundament. They are, according to their situation, called either *internal* or *external* piles. They may be either *blind* or *bleeding*. If the latter, blood may be seen exuding from them, and will come away every time the patient has a stool. For this reason the patient ought to be as quick as possible in relieving the bowels, and should not at such times sit one moment longer than is absolutely necessary.

When the piles are very large, they sometimes, more especially during a motion, drag down a portion of the bowel which adds much to the suffering. If the bowel should protrude, it ought, by means of the index-finger, to be immediately and carefully returned, taking care, in order that it may not scratch the bowel, that the nail is cut closely.

Piles are very painful and are exceedingly sore, and cause great annoyance.

A patient is predisposed to piles from the womb pressing upon the bloodvessels of the fundament. They are excited into action by neglecting to keep the bowels gently opened, or by diarrhœa, or from taking too strong purgatives, especially pills containing aloes or colocynth.

If the piles are inflamed and painful, they ought, by means of a sponge, to be well fomented three times a day, and for half an hour each time,

with hot camomile and poppy-head tea ;* and at bedtime a hot white-bread poultice should be applied.

Every time after and before the patient has a motion, it is well to anoint the piles and the fundament with the following ointment:

Camphor (powdered by means of a few drops of Spirits of Wine) one dram ;
Prepared Lard, two ounces ;
Mix to make an ointment.

If there is great irritation and intense pain, let some very hot water be put into a close stool, and let the patient sit over it. In piles attended with great irritation and pain, much relief is often obtained by sitting over the steam of hot water for fifteen or twenty minutes, and immediately applying a warm bread and milk poultice. These measures should be repeated five or six times a day.

If the heat is not great, and the pain not intense, the following ointment will be found efficacious:

Powdered Opium, one scruple;
Cumphor (powdered by means of a few drops of Spirits of Wine), half a dram;
Powdered Galls, one dram;
Spermaceti Ointment, three drams:
Mix.—The ointment to be applied to the piles three times a day.

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*Take four poppy-heads and four ounces of camomile blows, and boil them in four pints of water for half an hour, to make the fomentation, which should then be strained, and made quite hot in a saucepan when required.

If the heat and pain are great, the following liniment will be found useful:

French Brandy, } of each half an ounce.
Glycerine, }

Mix.—The liniment to be frequently applied, by means of a camel's hair pencil, to the piles, first shaking the bottle.

The bowels ought to be kept gently and regularly opened.

An electuary, composed of chopped figs, raisins, and senna, in a case of piles, is another admirable remedy for opening the bowels; it softens the motions, and is gentle in its operation, and is, moreover, agreeable to take. A piece the size of a nutmeg, or more, may be eaten every morning.

Take of best Alexandria Senna, powdered, 1 ounce.
" " Figs, - - - - 2 "
" " Raisins (stoned), - 2 "

All chopped very fine. The size of a nutmeg, or two, to be eaten either early in the morning or at bedtime.

Magnesia and milk of sulphur is an excellent remedy for the piles:—

Carbonate of Magnesia, } of each three drams.
Milk of Sulphur, }

Mix.—To make nine powders. One to be taken early every or every other mornlng, mixed in half a cupful of milk.

Remember, in these cases, it is necessary to keep the motions in a *softened* state, as *hard* lumps of stool would, in passing, give intense pain.

In piles, if they are not much inflamed, and there is constipation, a pint of tepid water, administered early every morning as an enema, will be

found serviceable. Care and gentleness ought to be observed in introducing the enema-pipe, in order not to press unduly on the surrounding piles.

The patient ought to lie down frequently in the day. She will derive great comfort from sitting on an air-cushion placed on the chair.

In piles, the patient ought to live on a plain, nourishing, simple diet, but should avoid all stimulants; any food or beverage that will inflame the blood will likewise inflame the piles.

Piles in pregnancy are frequently troublesome, and sometimes resist all treatment until the patient is confined, when they generally get well of themselves, but still the remedies recommended above will, even if they do not effect a cure, usually afford great relief.

Swollen legs from enlarged veins (*varicose veins.*)—The veins are frequently much enlarged and distended, causing the limbs to be greatly swollen and very painful, preventing the patient from taking proper walking exercise. Swollen legs are owing to the pressure of the womb upon the bloodvessels above. Women who have had large families are more liable than others to varicose veins. If a woman is married late in life, or if very heavy in pregnancy—carrying the child low down—she is more likely to have the veins so distend.

The best plan will be to wear an elastic silk stocking, which ought to be made for her, in order that it may properly fit the leg and foot. It will

draw on like a common stocking. She ought to wear a *gauze* stocking next to the skin, and the *elastic* stocking over it, as the gauze stocking can then, from time to time, be washed. The gauze stocking will also be more comfortable next the skin.

If the varicose veins should become more painful, it would be well to call a physician, as it may be necessary to have them enveloped in mild plasters, and then rolled.

If the feet and limbs are cold as well as swollen, a *domette* bandage, two inches and a half wide and eight yards long, nicely applied to each leg, from the toes to the knee, will be found a great comfort. One great advantage that domette has over calico is, that it will keep in its place for days, while calico will be loose in an hour or two.

Stretching of the skin of the abdomen is frequently, especially in a first pregnancy, distressing, from the soreness it causes. The best remedy is to rub the bowels, every night and morning, with warm camphorated oil, and to apply a broad *flannel* belt, which should be put on moderately but comfortably tight. The belt ought to be secured in its place by means of properly adjusted tapes.

If the skin of the abdomen, from the violent stretching, should be *cracked*, the patient had better dress the part affected, every night and morning, with equal parts of simple cerate and of lard; a lard without salt—well mixed together, spread on lint; which ought to be kept in its place by

means of a broad bandage, similar to the one used in confinements, and which is described in a subsequent paragraph (*Bandage after confinements.*)

Pendulous abdomen.—A lady sometimes, from being at these times unusually large, suffers severely; so much so, that she cannot, without experiencing great inconvenience, move about. This, where a patient is stout, and where she has had a large family of children, is more likely to occur, and especially if she has neglected proper bandaging after her previous confinements.

She ought, in such a case, to procure an elastic abdominal belt, which will, without undue pressing on the abdomen, be a support. It is a good plan to have the belt made either to lace behind or with straps and buckles, in order to accommodate the abdomen to its gradually increasing size.

If the patient is delicate, and has a languid circulation, she ought, instead of the elastic belt, to apply a broad flannel band, which should go twice around the bowels, and must be put on moderately and comfortably tight.

The patient, *before the approach of labor*, ought to take particular care to have the bowels *gently* opened, as during that time a costive state greatly increases her sufferings, and lengthens the period of labor. I say a *gentle* action is all that is necessary; a *violent* one would do more harm than good.

Toothache is a frequent complaint of pregnancy. I wish to caution my reader against having a tooth extracted while pregnant. Miscarriage or

premature labor has frequently followed the extraction of a tooth. It is necessary that this advice should be borne in mind, as the pain is sometimes so excruciating as to cause the sufferer to seek, at all hazards, speedy relief by extraction. Toothache is both worrying and wearying, and is, to all sufferers, very trying to the patience.

If the tooth is decayed, the hollow ought to be filled with cotton wool, soaked either in oil of cloves, or in equal parts of oil of cloves and of chloroform, and should be frequently renewed. Another excellent remedy is a little alum dissolved in chloroform.* Another excellent remedy is the face bag. This filled with hot water, will often afford immediate relief, when all other remedies fail. A bit of cotton wool placed in the ear of the affected side, will oftentimes relieve the toothache arising from a decayed tooth. This simple remedy ought always to be tried before resorting to more active treatment. If the above remedies do not relieve, soak a small ball of cotton wool in chloroform, and insert in the ear, and let it remain until the pain is relieved; let it be renewed from time to time. I have frequently found the above plan in toothache most efficacious, and to afford relief when other means have failed.

Creasote (spirits of tar) is sometimes applied, but of all remedies it is the worst for the purpose. I have known it, when thus used, to severely injure and decay the whole of the remaining teeth; one

*Ten grains of powdered alum to half an ounce of chloroform.

case in particular I remember, of a gentleman who by the frequent use of creasote, for the relief of toothache, lost the whole of his teeth! Not only so, but creasote applied to a tooth, has been known to cause death. The state of the bowels ought always to be attended to, as toothache is frequently caused by constipation.

Morning sickness.—It is said to be "morning," as in these cases, unless the stomach is disordered, it seldom occurs during any other part of the day. Morning sickness may be distinguished from the sickness of a disordered stomach by the former occurring only early in the morning, on the first sitting up in bed, the patient, during the remainder of the day, feeling quite free from sickness, and generally being able to eat and relish her food, as though nothing ailed her.

Morning sickness begins *early* in the morning, with a sensation of nausea, and as soon as she rises from bed she feels sick and retches; and sometimes, but not always, vomits a little sour, watery, glairy, fluid; and occasionally, if she has eaten heartily at supper the night before, the contents of the stomach are ejected. She then feels all right again, and is usually ready for her breakfast, which she eats with her usual relish. Many women have better appetites during pregnancy than at any other period of their lives.

The sickness of a disordered stomach unaccompanied with pregnancy may be distinguished from morning sickness by the former continuing during

the whole day, by the appetite remaining bad after the morning has passed, by a disagreeable taste in the mouth, and by the tongue being generally coated. In such cases there is usually much flatulence. The patient not only feels, but looks, bilious.

If the stomach is disordered during pregnancy, there will be a complication of the symptoms, and the morning sickness may become both day and night sickness. Proper means should then be employed to rectify the disordered stomach, and the patient will soon have only the morning sickness to contend against; which latter, after she has quickened, will generally leave of its own accord.

Morning sickness is frequently a distressing, although not a dangerous complaint. It is only distressing while it lasts, for after the stomach is unloaded, the appetite generally returns, and the patient usually feels, until the next morning, quite well again, when she has to go through the same process as before. It occurs both in the early and the latter months of pregnancy; more especially during the former, up to the period of quickening, *at which time it usually ceases.* Morning sickness is frequently the *first* harbinger of pregnancy, and is looked upon by many who have had children as a sure and certain sign. Morning sickness does not always occur in pregnancy; some women, at such times, are never sick.

A good way to relieve it is by taking, *before rising in the morning*, a cup of strong coffee. If this

should not have the desired effect, she ought to try an effervescing draught:

Take of—Bicarbonate of Potash, one dram and a half;
Water, eight ounces:
Two tablespoonfuls of this mixture to be taken with one of lemon juice every hour, whilst effervescing, until relief is obtained.

Sometimes the patient had better drink *plentifully of warm* water, in order to encourage free vomiting. Such a plan is advisable when the morning sickness is *obstinate*, and when the treatment recommended above has failed to afford relief.

The morning sickness, during the early months, is caused by sympathy between the stomach and the womb; and during the latter months by pressure of the upper part of the womb against the stomach. As we cannot remove the sympathy and the pressure, we cannot always relieve the sickness; the patient is sometimes obliged to bear with the annoyance. The bowels ought to be kept well regulated.

Great attention should be paid to the diet; it should be moderate in quantity, and simple in quality. Rich dishes, highly seasoned soups, and melted butter, must be avoided. Hearty meat suppers ought not on any account to be allowed. If anything is taken at night, there is nothing better than either a teacupful of nicely made and well-boiled oatmeal gruel, or of arrowroot. Either of the above may be made with water, or with new milk, or with cream and water.

It is an old saying, and I believe, as a rule, a true one, "that sick pregnancies are safe," more especially if the sickness leaves, which it generally does, after quickening. The above remarks do not include obstinate, inveterate vomiting, occasionally occurring in the *latter* period of pregnancy, and which not only takes place in the morning, but during the whole of the day and of the night, and for weeks together, sometimes bringing a patient to the brink of the grave. Such a case, fortunately, is extremely rare. Another old and generally true saying is, "that women who have sick pregnancies seldom miscarry." There is another consolation for those who suffer from morning sickness, from heartburn, and the numerous other discomforts of pregnancy, namely, they frequently have kinder labors, more lively children, and more comfortable recoveries than those who, at such times, do not suffer at all. Compensation here, as in almost everything else in this world, is found to prevail.

Means to harden the nipples.—A mother sometimes suffers severely from sore nipples. Especially is this true with the first child. Such suffering may frequently be prevented, if, for six weeks or two months before confinement, the nipples are bathed for five minutes every night and morning, either with *eau de Cologne*, or with equal parts of brandy and water. The better plan will be to have the brandy and water in a small bottle ready for use, and putting a little each time in a

teacup, using it fresh. A soft piece of fine old linen mull should be used for the purpose of bathing. All pressure ought to be taken from the nipples. If the stays unduly press them, either let them be enlarged or, better still, entirely removed. The nipples themselves ought to be covered with soft linen, as the friction of a flannel vest would be apt to irritate them. Let me recommend every pregnant lady, *more especially in a first pregnancy*, to adopt either one or the other of the above plans to harden the nipples. It may avert much misery, as sore nipples are painful and distressing. Prevention at all times is better than cure.

The *breasts are*, at times, during pregnancy, *much swollen and very painful;* and occasionally cause the patient great uneasiness. She fancies that she is going to have either a tumor or a gathering of the breast. There need, in such cases, be no apprehension. The swelling and the pain are the consequence of pregnancy, and will, in due time, subside without any unpleasant result. The fact is, great changes are taking place in the breasts; they are developing and are preparing for the important functions they will soon have to perform.

Treatment.—Every night and morning rub them well with equal parts of *eau de Cologne* and of olive oil, and wear a piece of new flannel over them, taking care to cover the nipples with soft linen. The liniment encourages a little milky fluid to ooze out of the nipple, which will afford relief.

The Bladder.—The patient during pregnancy is

liable to various affections of the bladder. There is sometimes a *sluggishness* of that organ, with little or no inclination to urinate. At other times there is a great *irritability* and constant desire to pass urine; while in a third case, more especially toward the end of pregnancy, the urine can hardly be retained—the slightest bodily exertion, such as walking, stooping, coughing, sneezing, etc., causes it to pass involuntarily; and even in some cases, where the patient is perfectly quiet, it passes without her having power to prevent it.

A sluggish state of the bladder is best remedied by gentle exercise, and by the patient attempting to make water at least every four hours.

Irritability of the Bladder.—The patient ought to drink freely of the following beverage:

Best Gum Arabic, one ounce;
Pearl Barley, one ounce;
Water, one pint and a half;
Boil for a quarter of an hour, then strain, and sweeten either with granulated or lump sugar.

The bowels ought to be kept gently open and the patient should live on a mild, bland, nourishing diet.

Where the urine cannot be retained there is not a great deal to be done, as the womb by pressing on the bladder prevents much present relief. The patient ought frequently in the day to lie either on a hair mattress or a couch. She should drink but a moderate quantity of liquid, and if she has a cough (for a cough greatly increases this complaint) she ought to take the following mixture:

Compound Tincture of Camphor, half an ounce;
Compound Spirits of Lavender, half a dram;
Oxymel of Squills, six drams;
Water, six ounces and a half;
Two tablespoonfuls to be taken three times a day.

Fainting.—A delicate woman in pregnancy is apt to feel faint, or does actually faint away. When we consider the enormous changes that take place during pregnancy, and the great pressure there is upon the nerves and the bloodvessels, it is not at all surprising that this is true. Fainting at such times is disagreeable, but not at all dangerous, unless the patient is subject to heart disease.

Treatment.—The first thing to be done in fainting, is to lay the patient flat on the bed with the head even or lower than the rest of the body. The stays and any tight articles of dress—if she has been foolish enough to wear either tight stays or tight clothes—ought to be loosened; the windows should be thrown wide open; water ought to be sprinkled on her face; and sal-volatile—a teaspoonful in a wineglassful of water, or a glass of wine, ought to be administered. Smelling salts must be applied to the nostrils. The attendants should not crowd around her, as she ought to have plenty of fresh air.

She must, in the intervals, live on good, light, generous diet, keep early hours, and sleep in a well-ventilated apartment. The following strengthening medicine will be found serviceable:

Sulphate of Quinine, twelve grains;

Diluted Sulphuric Acid, half a dram;
Syrup of Orange peel, half an ounce;
Water, seven ounces and a half:
Two tablespoonfuls to be taken three times a day.

A nervous patient during this period is subject to *palpitation of the heart*. This palpitation, provided it occur only during pregnancy, is not dangerous, and need not cause alarm. It is occasioned by the pressure of the womb upon the large blood-vessels, which induces a temporary derangement of the heart's action. This palpitation is generally worse at night, when the patient is lying down. When lying down, the midriff, because of the increased size of the abdomen, is pressed upward, and for this reason the heart has not its accustomed room in which to work, and palpitation is the result.

The best remedies are half a teaspoonful of compound spirits of lavender, or a teaspoonful of sal-volatile in a wine glass of camphor mixture, or a combination of lavender and of sal-volatile :

Compound Spirits of Lavender, one dram;
Sal Volatile, eleven drams;
Mix.—A teaspoonful of the drops to be taken occasionally in a wine glass of water,

These medicines should be kept at the bedside of the patient, in order that they may be administered at once, if necessary. Brandy is sometimes given, but it is a dangerous remedy, while the lavender and the sal-volatile are perfectly safe medicines, and can never do the slightest harm.

Mental emotion, fatigue, late hours, and close

rooms ought to be guarded against. Gentle out-door exercise, and cheerful but not boisterous company, are desirable.

Cramps of the legs and thighs are apt to attend pregnancy, especially at night and during the latter months; they are caused by pressure of the womb upon the nerves which extend to the lower extremities. *Treatment.*—Tightly tie a folded handkerchief round the limb a little above the part affected, and let it remain on for a few minutes. Friction by means of the hand either with opodeldoc or with laudanum (*taking care not to drink it by mistake*) will also give relief. Cramps sometimes attack either the bowels or the back of a pregnant woman; when such is the case, let a bag of hot salt, or a hot water bottle, filled with hot water, and covered with flannel, be applied over the part affected; and let a bottle of hot water or a hot brick, encased in flannel, be placed to the soles of the feet. If cramps of the bowels, the back, or the thighs are very severe, the following mixture will be serviceable:

Compound Tincture of Camphor, one ounce:
Dill Water, five ounces;

A wine glass of this mixture should be taken at bedtime occasionally, and be repeated, if necessary, in four hours.

The whites, especially during the latter months, and particularly if the patient has borne many children, are troublesome, and are, in a measure, owing to the pressure of the womb on the parts below, causing irritation. The best way to obvi-

ate such pressure, is for the patient to lie down a great part of each day. She ought to retire early, sleep on a hair mattress, and in a well ventilated apartment. A thick, heavy quilt at these times, and indeed at all times, is particularly objectionable ; the perspiration cannot pass readily through it as through blankets. The bowels ought to be gently opened.

The best application will be, to bathe the parts with fuller's earth and warm water, in the proportion of a handful of *powdered* fuller's earth to half a wash-basinful of warm water. The *internal* parts ought, night and morning, to be bathed with it. If the fuller's earth should not have the desired effect, an alum injection* should be used every night and morning by means of a fountain syringe or fifteen drops of the solution of diacetate of lead should be added to a quarter of a pint of lukewarm water, and be used in a similar manner as the alum injection.

Cleanliness, in these cases, cannot be too strongly urged. Indeed, every woman, either married or single, ought, unless special circumstances forbid, to use the sitz-bath. If she has *not* the whites, or if she has them only slightly, *cold*, quite cold, water is preferable to tepid. I should advise *every* woman, both married and single, to take a quick sitz-bath *every morning* (except during monthly periods); throwing either a small blanket or shawl over her shoulders when bathing.

*Dissolve half a teaspoonful of powdered alum in a quarter of a pint of tepid water, to make the injection.

She should, for the first few mornings, make the water lukewarm; but the quicker it can be used cold—quite cold—the more good it will do. If the above plan were more generally followed, women of all classes and ages would derive immense benefit from its adoption, and many serious diseases would be warded off. The use of the sitz-bath, after a time, would be a great comfort and enjoyment.

When the patient has been much weakened by the whites, she will derive benefit from a quinine mixture (see a previous paragraph)—a dose of which ought to be taken twice or three times a day.

Irritation and itching of the external parts is a most troublesome affection, and may occur at any time, but more especially during the latter period of pregnancy. It is a subject upon which a woman is too delicate and too sensitive to consult a physician, and the misery it entails, if not relieved, is almost past endurance.

In the first place, the diet should be simple and nourishing; avoiding stimulants of all kinds. In the next place, use a tepid salt and water sitz-bath. Put a large handful of table salt into the sitz-bath, then add *cold* water to the depth of three or four inches, and sufficient *hot* water to make the water *tepid* or *lukewarm*. The patient must sit in the bath, only for a few seconds. Patients generally derive great comfort and benefit from these salt and water sitz-baths. It is an important item of treatment.

If the itching continues, the following lotion ought to be used:

Solution of diacetate of lead, one dram;
Rectified spirits of wine, one dram;
Distilled water, one pint.

To make a lotion.—The parts affected to be bathed three or four times a day with the lotion. Or the parts may be bathed two or three times a day with equal parts of vinegar and of water.

The external parts, and the passage to the womb (the vagina) in these cases, are not only *irritable* and *itching*, but are sometimes *hot* and *inflamed*, and *are covered either with small pimples*, or *with a whitish exudation* of the nature of *aphtha* (thrush), somewhat similar to the thrush on the mouth of an infant; then, the addition of glycerine to the lotion is a great improvement, and usually gives immense relief. Either of the following is a good lotion for the purpose:

Biborate of soda, eight drams;
Glycerine, five ounces;
Distilled water, ten ounces.

To make a lotion.—The part affected to be bathed every four hours with the lotion, first shaking the bottle.

Or the following may be used as an injection:

Dried white oak bark, one-half pound;
Water, six quarts;

Boil down to one gallon and strain. Reduce one-half with hot water, and use with fountain syringe.

False labor pains, especially in a first pregnancy, are sometimes troublesome. These pains usually come on at night, and are frequently owing to a disordered stomach. They affect the abdomen,

the back and the loins; and occasionally they extend down the hips and the thighs. They attack first one place and then another; they come on at irregular intervals; at one time they are violent, at another they are feeble. The pains, instead of being *grinding* or *bearing down*, are more of a colicky nature.

As these false pains more frequently occur in a *first* pregnancy, and as they are often more violent two or three weeks toward the completion of the full time, and as they usually come on either at night or in the night, it behooves both the patient and the monthly nurse to be cognizant of the fact, in order that they may not make a false alarm, and summon the doctor before he is really wanted, and when he cannot be of the slightest benefit to the patient.

It is sometimes stated that a woman has been in labor two or three weeks before the child was born! Such is not the fact. The case in question is one probably of *false* pains ending in *true* pains.

How, then, is the patient to know that the pains are false and not true labor pains? False labor pains come on three or four weeks *before* the full time; true labor pains *at* the completion of the full time; false pains are unattended with "show;" true pains generally commence the labor with "show;" false pains are generally migratory — changing from place to place—first attacking the loins, then the hips, then the lower portions, and even other portions of the abdomen—first one part, then another;

true pains generally begin in the back; false pains commence as spasmodic pains; true pains as grinding pains; false pains come on at uncertain periods, at one time a quarter of an hour elapsing, at others, an hour or two hours between each pain—at one time the pain is sharp, at another, trifling; true pains come on with tolerable regularity, and gradually increase in severity.

But remember—the most valuable distinguishing symptom is the *absence of show* in false labor pains, and the *presence* of it in true labor pains. It might be said that *show* does not always usher in the commencement of labor. Granted; but such cases are exceedingly rare, and may be considered as the exception and not the rule.

Treatment.—The patient ought to abstain for a day or two from all stimulants. The bowels should be rubbed every night at bedtime either with camphorated oil, previously warmed, or with laudanum. Either hot salt, in a flannel bag, or an India-rubber hot water bottle applied every night at bedtime to the abdomen, frequently affords great relief.

The period of gestation is usually two hundred and eighty days—forty weeks—ten lunar or nine calendar months. It will be well to commence the estimate about three days after the last day of menstruation.

A good plan is as follows: Let forty weeks and a few days, from the time specified above, be marked on an almanac, and the date will seldom

be far from correct. Suppose, for instance, the last day of menstruation was on January the 15th, the patient may expect to be confined on or about October the 25th.

I may in passing, just point out the great importance of a wife making, every time, a note of the *last* day of her periods; by doing so it might save her a great deal of inconvenience, uncertainty, and anxiety.

A pregnancy table.—The following *table*, showing the *probable* commencement, duration, and completion of pregnancy, and indicating the date on or about which day the labor might occur, will, I trust, be found very useful. This *table* allows three days over the 280 days—making 283 days; that is, the count of 280 days commences three days after the last day of menstruation. The reason I have chosen the third day is, that conception is more likely to take place a few days—say three days—after the last day of the periods than at any other time.

A PREGNANCY TABLE.

Last day of the Periods.	Labor On or About.	Last day of the Periods.	Labor On or About.
Jan. 1	Oct. 11	Jan. 10	Oct. 20
" 2	" 12	" 11	" 21
" 3	" 13	" 12	" 22
" 4	" 14	" 13	" 23
" 5	" 15	" 14	" 24
" 6	" 16	" 15	" 25
" 7	" 17	" 16	" 26
" 8	" 18	" 17	" 27
" 9	" 19	" 18	" 28

Last day of the Periods.	Labor On or About.
Jan. 19	Oct. 29
" 20	" 30
" 21	" 31
" 22	Nov. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Feb. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	Dec. 1
" 22	" 2
" 23	" 3
" 24	" 4

Last day of the Periods.	Labor On or About.
Feb. 25	Dec. 5
" 26	" 6
" 27	" 7
" 28	" 8
Mar. 1	" 9
" 2	" 10
" 3	" 11
" 4	" 12
" 5	" 13
" 6	" 14
" 7	" 15
" 8	" 16
" 9	" 17
" 10	" 18
" 11	" 19
" 12	" 20
" 13	" 21
" 14	" 22
" 15	" 23
" 16	" 24
" 17	" 25
" 18	" 26
" 19	" 27
" 20	" 28
" 21	" 29
" 22	" 30
" 23	" 31
" 24	Jan. 1
" 25	" 2
" 26	" 3
" 27	" 4
" 28	" 5
" 29	" 6
" 30	" 7
" 31	" 8
April 1	" 9
" 2	" 10

Last day of the Periods.	Labor On or About.
April 3	Jan. 11
" 4	" 12
" 5	" 13
" 6	" 14
" 7	" 15
" 8	" 16
" 9	" 17
" 10	" 18
" 11	" 19
" 12	" 20
" 13	" 21
" 14	" 22
" 15	" 23
" 16	" 24
" 17	" 25
" 18	" 26
" 19	" 27
" 20	" 28
" 21	" 29
" 22	" 30
" 23	" 31
" 24	Feb. 1
" 25	" 2
" 26	" 3
" 27	" 4
" 28	" 5
" 29	" 6
" 30	" 7
May 1	" 8
" 2	" 9
" 3	" 10
" 4	" 11
" 5	" 12
" 6	" 13
" 7	" 14
" 8	" 15
" 9	" 16

Last day of the Periods.	Labor On or About.
May 10	Feb. 17
" 11	" 18
" 12	" 19
" 13	" 20
" 14	" 21
" 15	" 22
" 16	" 23
" 17	" 24
" 18	" 25
" 19	" 26
" 20	" 27
" 21	" 28
" 22	Mar. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
June 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25

Last day of the Periods.	Labor On or About.
June 16	Mar. 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	April 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
July 1	" 10
" 2	" 11
" 3	" 12
" 4	" 13
" 5	" 14
" 6	" 15
" 7	" 16
" 8	" 17
" 9	" 18
" 10	" 19
" 11	" 20
" 12	" 21
" 13	" 22
" 14	" 23
" 15	" 24
" 16	" 25
" 17	" 26
" 18	" 27
" 19	" 28
" 20	" 29
" 21	" 30
" 22	May 1

Last day of the Periods.	Labor On or About.
July 23	May 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Aug. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	June 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7

Last day of the Periods.	Labor On or About
Aug. 29	June 8
" 30	" 9
" 31	" 10
Sept. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	July 1
" 22	" 2
" 23	" 3
" 24	" 4
" 25	" 5
" 26	" 6
" 27	" 7
" 28	" 8
" 29	" 9
" 30	" 10
Oct. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14

Last day of the Periods.	Labor On or About.
Oct. 5	July 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	Aug. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Nov. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20

Last day of the Periods.	Labor On or About.
Nov. 11	Aug. 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	Sept. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
Dec. 1	" 10
" 2	" 11
" 3	" 12
" 4	" 13
" 5	" 14
" 6	" 15

Last day of the Periods.	Labor On or About.
Dec. 7	Sept. 16
" 8	" 17
" 9	" 18
" 10	" 19
" 11	" 20
" 12	" 21
" 13	" 22
" 14	" 23
" 15	" 24
" 16	" 25
" 17	" 26
" 18	" 27
" 19	" 28
" 20	" 29
" 21	" 30
" 22	Oct. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10

This *pregnancy table* may, as a rule, be safely relied upon. Many of my patients have for years, from these estimates, been *often* confined on the very day specified. I say *often* as it is utterly impossible to fix upon the *exact* day—the *approximate* day can only be specified—some women being at their full time as early as the thirty-seventh week; while others, although but very rarely, are not at their

full time until the forty-fifth week—hence the uncertainty in some cases of such calculations.

A woman may, by becoming pregnant while nursing, be put out of her reckoning. Not being unwell at such a time, she consequently does not know how to count. She ought in this case to take the time of quickening as a starting point, from which time, count ahead one hundred and fifty-six days. It must be borne in mind, however, that so correct an estimate can never be made, quickening taking place at a date varying in different individuals. Occasionally a wrong estimate may be made, owing to the fact that some women have a slight menstruation the first and even succeeding months after conception has taken place. These cases are rare, however, and when they do occur the last normal period should be taken, from which the estimate should be made.

The question is frequently asked, "Can a physician tell, before the child is born, whether it will be a boy or a girl?" Many eminent physicians claim that this can be done, and base their opinions upon what they suppose to be a law of nature. This law is to the effect that if conception takes place in the early part of the menstrual period a female child will be the result; if in the latter part, a male child will be born. It has been observed that queen-bees lay female eggs first and male eggs afterward. The same is true of domesticated fowls, and from these facts, the observations made by physicians, and the experiments

of stock-raisers, this law has been deduced. That it does not hold good in all cases, there can be little doubt, but, notwithstanding the exceptions, I think that there is good ground for the belief, and that in a majority of cases the supposed law will prove true.

From this it will be seen that if the unborn child is a girl confinement should take place at the date denoted by the pregnancy table, and that when a woman goes beyond this date it should prove a boy. This will generally be the case. Beside the above method of ascertaining the sex of the fœtus, the skilled physician can usually determine the same by the fœtal heart beat, the pulsations being more rapid in the female than the male.

The nurse.—It is an important, a most important, consideration to choose a nurse rightly and well; the well-doing of both mother and babe often depends upon a right selection.

A nurse ought to be middle-aged. If young, she is apt to be thoughtless and giggling; if old, she may be deaf and stupid, and may think too much of her trouble. She should have calmness and self-possession. She must be gentle, kind, good-tempered, and obliging, but firm withal, and she should have a cheerful countenance. "Some seem by nature to have a vocation for nursing; others do not. Again, nursing has its separate branches; some have the light step, the pleasant voice, the cheering smile, the dexterous hand, the gentle touch; others are gifted in cook-

ery for the sick." The former good qualities are essential to a nurse, and if she can combine the latter—she will be invaluable.

She ought neither to be a tattler, nor a tale-bearer, nor a croaker, nor a putterer. A tattler is an abomination; a clacking tongue is most wearisome and injurious to the patient. A tale-bearer is to be especially avoided; if she tell tales of her former cases, my reader may depend upon it that her turn will come. Have nothing to do with *a gossip* of a nurse; she is a most dangerous person to have about you.

But of all nurses to be shunned as the plague is the croaker, one that discourses of the dismal and of the dreadful cases that have occurred in her experience, many of which, in all probability, she herself was the cause of. She is a very upas tree in a house. A putterer should be banished from the lying-in room; she is a perpetual worry—a perpetual blister! She is a nurse without method, without system, and without smartness. She putters at this, and putters at that, and worries the patient beyond measure. She dreams, and drawls, and putters. It is better to have a brusque and noisy nurse than a puttering one. She ought to be either a married woman or a widow.

She must be sober, temperate and healthy, and free from deafness, and from any defect of vision. She should have a gentle manner, but yet not melancholy. She ought to have the softest step and the gentlest tone. She ought to be fond of chil-

dren, and must neither mind her trouble nor being disturbed at night. She should be a light sleeper.

Scrupulous attention to cleanliness, freshness, and neatness in her own person, and toward the patient and the infant, are most important requisites.

In choosing a nurse select one who has a bright, sunshiny countenance—having nothing to do with a sour-faced individual.

The nurse ought to be engaged *early* in pregnancy, as a *good* nurse is caught up soon, and is full of engagements. This is most important advice. A lady frequently has to put up with an indifferent nurse from neglecting to engage her in time. The physician, at the eleventh hour, is frequently besought to perform an impossibility—to select a *good* nurse, and which he could readily have done if time had been given him to make the selection. Some of my best nurses are engaged by my patients as early as two or three months after conception, in order to make sure of having their favorite nurses.

A nurse ought to be in the house for a week or ten days before the commencement of labor, in order that there may be neither bustle nor excitement, and no hurrying to and fro at the last moment to find her; and that she may have everything prepared, and the linen well aired for the coming event.

My reader may say, "You want a nurse to be perfection?" Well, I do; a nurse ought to be as

near perfection as poor human nature will allow. None but good and true women should enter the ranks of nurses; for their responsibility is great, and their power of doing either good or evil is enormous. Hence good nurses are prizable, and should be paid most liberally.

The selection of a nurse is, for the well-being both of mother and of babe, quite as important as is the choice of a doctor; indeed, I do not know whether she is not of more importance. Mother and babe are thoroughly dependent upon her for most important services.

I hope I have said enough—I am quite sure that I have not said one word too much—on the care required in the selection of a nurse. It is impossible when such important interests are at stake, to be too particular, or to overstate its importance.

CHAPTER VII.

MISCARRIAGE AND ABORTION.

A premature expulsion of the fœtus before the end of the sixth month is called either a *miscarriage* or an *abortion;* after this time, but before the *full* period of nine months, a *premature labor.*

A miscarriage is a serious calamity, and should be considered in that light; not only to the mother herself, whose constitution frequent miscarriages seriously injure, and eventually ruin; but it may rob the *wife* of one of her greatest earthly privileges, the inestimable pleasure and delight of being a *mother.*

As a miscarriage may *generally* be prevented, it behooves a wife to look well into the matter, and to study the subject thoroughly for herself, in order to guard against her *first* miscarriage; for the *first* miscarriage is the one that frequently leads to a *series.*

Causes.—A slight cause will frequently occasion the separation of the child from the mother, and the consequent death and expulsion of the fœtus; hence the readiness with which some women miscarry. The following are the most common causes: *Long* walks; riding on horseback, or over rough

roads in a carriage; a *long* railway journey; over-exertion and sitting up late at night; too frequent sexual intercourse. The excitement incident to parties, balls and concerts; all violent emotions of the mind, passion, fright, etc.; fatigue; over-reaching; sudden shocks or falls; taking a wrong step either in ascending or in descending stairs; falling down stairs; lifting heavy weights; violent drastic purgatives; calomel; obstinate constipation; debility of constitution; consumptive habit of body; fashionable amusements; dancing; late hours; tight lacing; indeed, anything and everything that injuriously affects either the mind or the body.

A woman threatened with miscarriage usually experiences a feeling of lassitude, of debility, of *malaise* and depression of spirits; she feels as though she were going to be unwell, and complains of weakness and uneasiness about the loins, the hips, the thighs, and the lower part of the abdomen. This is an important stage of the case, and one in which judicious treatment will almost to a certainty prevent a miscarriage.

More serious symptoms of miscarriage.—If the above symptoms are allowed to proceed, unchecked and unattended, after a day or two there will be a slight show of blood. This show soon increases to flooding, and shortly becomes clotted. There may at this time be but little pain, and the miscarriage *may*, with judicious treatment, be even now warded off. At all events, if the miscarriage can

not be prevented, the ill effects may, with care, be palliated, and means may be used to prevent a future miscarriage.

Decided symptoms of a miscarriage.—If the miscarriage is allowed to proceed, a new train of symptoms develop, pains begin to come on, at first slight, irregular, and of a grinding nature, but which soon become more severe, regular, and of a bearing-down nature. Indeed, the case is now a labor in miniature, and the patient is sure to miscarry.

There are two stages of miscarriage—first, *the separation* of the ovum from the womb; and second, *the expulsion* of the ovum from the womb. The former, from the rupture of vessels, is necessarily attended with more or less of flooding. The latter, in addition to the flooding, from the contraction of the womb, with more or less of pain. If there is separation, there must follow expulsion, as Nature is doing all she can to get rid of the separated ovum, which has now become a foreign body; and if there is expulsion, there must, of necessity, be pain, as contraction of the womb invariably causes pain; hence there is, *in every miscarriage*, more or less of flooding and of pain; indeed, you cannot have a miscarriage without both the one and the other.

The most usual time for a woman to miscarry, is from the eighth to the twelfth week. It is not confined to this period, as during the whole time of pregnancy there is a chance of premature expulsion of the contents of the womb. A miscar-

riage *before* the fourth month is *at the time* attended with little danger; although, if neglected, it may *forever* injure the constitution.

A miscarriage sometimes begins and ends in a few days—five or six; it at other times continues two, and even three weeks.

Treatment.—If the patient has the slightest show, she should immediately confine herself to the bed and keep perfectly quiet. A soft feather bed must be avoided; it both enervates the body and predisposes to miscarriage. There is nothing better for her to sleep on than a hair mattress.

Sexual intercourse should be carefully avoided; indeed, the patient ought to have a separate bed. This is most important advice, and must be followed.

The patient should be put on low diet, such as arrowroot, tapioca, sago, gruel, chicken broth, tea, toast and water, and lemonade; and whatever she drinks ought to be cold. Grapes at these times are cooling and refreshing.

The temperature of a bedroom should be kept cool; and if in summer, the window ought to be thrown open. Laxative medicines must be avoided; and if the flooding is violent, cold compresses should be applied externally to the parts.

The same care is required *after a miscarriage* as after a confinement; indeed, a patient requires to be treated much in the same manner. She ought to keep her bed for a few days, and should live upon the diet recommended after a confinement,

avoiding for the first few days stimulants of all kinds. Many women date their state of ill health to a *neglected* miscarriage; and it behooves every woman to guard against such a misfortune.

A patient prone to miscarry ought to use every means to brace and strengthen her system, before again becoming pregnant. The best plan that she can adopt will be TO LEAVE HER HUSBAND FOR SEVERAL MONTHS, and go to some healthy spot; neither to a fashionable watering-place, nor to a friend's house where much company is kept, but to some quiet country place—if to a healthy farm-house so much the better.

Early hours are quite indispensable. She ought to lie on a hair mattress, and should have but scant clothing on the bed. She must sleep in a well-ventilated apartment. Her diet should be light and nourishing. *Gentle* exercise ought to be taken, which should alternate with frequent rest.

Cold baths ought to be used every morning, and the body should afterward be dried with coarse towels. If in winter let the water be made tepid, and its temperature gradually lowered until used quite cold. A shower bath is in these cases serviceable; it braces and invigorates the system, and is one of the best tonics she can use.

If *she is already pregnant* it would not be admissible, as the shock of the shower bath would be too great and might bring on a miscarriage; but still *she ought to continue the cold bathing.*

A lady who is prone to miscarry ought, *as soon*

as she is pregnant, to lie down a great part of every day; she must keep her mind calm and unruffled, live on a plain diet, retire early to rest, *and have a separate sleeping apartment.* She ought to abstain from taking laxative medicine, and constipation should be avoided or treated by following the suggestions in the chapter on constipation.

Gentle walking exercise daily is desirable; *long* walks and horseback riding must be sedulously avoided.

As the *usual* period for miscarrying approaches (for it frequently comes on at one particular time), let the patient be more than usually careful; let her lie down the greatest part of the day; let her mind be kept calm and unruffled; let all fashionable society and every exciting amusement be eschewed; let both the sitting and the sleeping apartments be kept cool and well ventilated; let the bowels, if costive, be opened by an enema of warm water, or the *external* application of castor oil; let the diet be simple, yet nourishing; let all stimulants be avoided; and if there are the *slightest* symptoms of an approaching miscarriage, such as pains in the loins, the hips, or in the lower abdomen, or the slightest show of blood, let a physician be *instantly* sent for, as he may, at an early period, be able to ward off the threatened mishap.

Criminal abortion.—Children have a right to be born! Alas, that this God-given privilege should ever be called in question! That it is so, how-

ever, the testimony of modern physicians, the daily records of the newspapers, the fulminations from the pulpit, the remonstrances of philanthropists, and the forebodings of philosophers, abundantly prove.

If we examine the history of abortion, we shall find that this crime, now so commonly practiced as to demand the attention it is receiving from moralists, is of extremely ancient origin, having existed among pagan nations from the earliest times; that the influence of Christianity has ever been to banish the practice, and that in proportion as Christianity becomes weakened or destroyed, the fearful evil in question reappears and extends.

"If this evil were principally resorted to for the purpose of covering up the fruits of licentiousness, and shielding from open disgrace, the victims of dishonored virtue, there might perhaps be a faint apology for silence, but with shame for the wives and mothers of our land, the statement is made, that they are the chief offenders. This statement may seem strange to the ears of many a devoted wife and mother, but to the physician, who is generally a receiver of family secrets, it is a well-known fact."

Intentional abortion is to all purposes a murder. This is now conceded by all who are informed upon the subject. Among the ancients the distinction was made that before the time of quickening the child has no life, and therefore there was no sin in its destruction. This monstrous heresy

against religion, science and common sense is not without its imitators in our own time. That the embryo is alive and hence quick from the moment of conception, modern science has abundantly proven. It follows, then, that this crime is equally as great whether committed in the early weeks of pregnancy or at a more advanced period in the life of the fœtus.

The laws of all civilized countries make abortion a crime, and the punishment severe. All who are accessory to it may be punished with imprisonment, and in some cases even with death. Aside from this, however, the maternal instinct of the mother and a sufficient regard for her own health should prevent any and all attempts of this character. The amount of physical suffering that may follow cannot be estimated. Inflammations of the womb and kindred disorders of the generative organs are almost sure to result, and frequently will resist the most skillful treatment. At other times blood poisoning may follow from the retention of the placenta and membranes of the fœtus. This may produce immediate death, and at best can but end in broken health and lifelong suffering.

In extenuation of this evil some may say that many of the diseases of delicate women are due to excessive child-bearing. This is undoubtedly true. Hardly a day passes that a physician of large practice will not see instances of debility from this source. The evils of a too rapid successions of pregnancies are likewise conspicuously

seen in the children. Puny, sickly, short-lived or idiotic children are apt to follow over-production. Often they come to the mother already over-burdened with the cares of numerous progeny, and cannot receive at her hand the care and attention they require. To some women pregnancy is a nine-months' torture, and there are others to whom it is almost certain to prove fatal. In such cases an increase of family is a condition not to be desired, but the remedy lies, not in destroying the product of conception, but rather in preventing that condition. In a preceding chapter the method by which this result may be attained, has been mentioned. It is a law of nature—to which there may be some exceptions—that conception must take place at about the time of the menstrual flow. If sexual intercourse occurs a short time before this period, the male germ may remain viable, and undoubtedly the female germ remains in the womb and retains its vitality a few days after the flow ceases. The conditions of health, temperament and surroundings are so varied that no infallible law can be stated that will govern all cases. It may be said with certainty, however, that from ten days after the cessation of the menstrual flow until three days preceding its return, there is very little chance of conception, while the converse is equally true. An understanding of this simple law has enabled many to regulate the number of offspring at will. To do this, however, requires something more on the part of the husband than to blindly

follow the animal passion so long his inheritance. It requires continence, self-control and a willingness to deny himself, and when he can accomplish this then there will be fewer cases of outraged nature, and more of the children born will be conceived and nurtured in love.

CHAPTER VIII.

PRE-NATAL CULTURE.

That a mother may, during the period of gestation, exercise some influence, by her own voluntary mental and physical action, either unwittingly or purposely (and aside from the usual involuntary action of the laws of heredity) in determining the traits and tendencies of her offspring, is now a common belief among intelligent people. But probably few have any definite understanding of the process by which such results are effected, or conception of the extent to which this process may be controlled, by intelligent purpose and wise direction, for the benefit of our children and the improvement of our race.

No more important subject can engage the attention of parents, and there is none in which intelligent and loving mothers will take a deeper interest when once made intelligible to them.

The assertion has been made that "it is for the mother, by the use of appropriate means (provided a sufficient organic *capacity* has been germinally contributed by the father, and provided, also, the mother's efforts are properly seconded by the father) to produce a poet, a thinker, an artist, an

inventor, a philanthropist, or any other type of manhood or womanhood, desirable or undesirable, as she will."

If this, or any near approximation to it, is possible, it is surely worth the while of every mother, and father also, to make an effort to know in what these *appropriate means* consist, and how to apply them successfully.

An author, Dr. Brittan, who has given much study to the occult problems of human life, gives the following very reasonable hypothesis as to the law or process of embryonic moulding:

"The singular effects produced on the unborn child by the sudden mental emotions of the mother are remarkable examples of a kind of *electrotyping* on the sensitive surfaces of living forms. It is doubtless true that the mind's action, in such cases, may increase or diminish the molecular deposits in the several portions of the system. The precise place which each separate particle assumes in the new organic structure may be determined by the influence of thought or feeling. If, for example, there exists in the mother any unusual tendency of the vital forces to the *brain* at the critical period, there will be a similar cerebral development and activity in the offspring."

In illustration and confirmation of this law, the same author gives the following facts:

"A lady, who, during the period of gestation, was chiefly employed in reading the poets and in giving form to her day-dreams of the ideal world,

at the same time gave to her child (in phrenological parlance) large *ideality*, and a highly imaginative turn of mind.

"Some time since we met with a youth who had finely moulded limbs and a symmetrical form throughout. His mother has a large, lean, attenuated frame, that does not offer so much as a single suggestion of the beautiful. The boy is doubtless indebted for his fine form to the presence of a beautiful French lithograph in his mother's sleeping apartment, and which presented for her contemplation the faultless form of a naked child."

The electrotyping process referred to in the above quotation may not be familiar to every reader. It consists in causing, by means of electrical agency, the deposit of fine particles of metal (as gold, silver or copper) dissolved in a powerful acid, upon the surface of any article which it is desired should receive a coating of such metal. Gilding, silver-plating and copper-facing are now executed to a large extent by this curious process, the coating of metal thus deposited becoming exceedingly compact and durable, and capable of being made of any desirable thickness, proportionate to the time occupied in the process. It is reasonable to suppose that by a somewhat similar process, effected by the vital forces of the mother, and to some extent controllable by her mental operations and emotions, are deposited the molecules of matter which go to form the human embryo in all its various parts.

A striking fact, in further illustration of the same law, is given by the author of the valuable book entitled "*Husband and Wife*."

It is to this effect: A teacher in a Western State had under her instruction five children belonging to one family. "The two eldest were dull, inert, and slow to learn; while the third, a girl about twelve years of age, was remarkably bright, sensitive and talented. Not only apt and quick at her lessons, she possessed a fine poetic temperament, accompanied by a keen appreciation of the beauties of nature; she could also write a theme in prose or verse with ease and facility. The children younger than this one were both physically and mentally superior to the two eldest, but far inferior to her in talent and refinement of manners." These differences were so marked that the teacher's curiosity was excited to learn the cause. Becoming intimately acquainted with the mother (who at first could assign no reason for the diversity), the teacher at length ascertained the following facts: Some months prior to the birth of the favored child, the mother (who, though reared in an Eastern State, in the enjoyment of fair advantages, had become the wife of a farmer in a new country, deprived of literary and social privileges, and overworked in the struggle to acquire a competence) had her attention attracted to a volume of Walter Scott's poems, brought to the house by a canvasser; and she was so seized with a desire to possess and read the book, that, not having at hand

the money to purchase it, she had walked four miles at night to borrow of a friend a sufficient sum for the purpose. "And a glorious time I had in reading it," she said; "for often in the perusal of its pages I forgot my fatigues and cares." Having read the book so often that she came to know much of it by rote, she used to sing the songs to the child when an infant, and afterward to repeat the stories to her when a little girl. Here, no doubt, was the source of the superior intelligence, refinement and poetic tendencies of the child.

An old schoolmaster stated that in the course of his personal experience he observed a remarkable difference in the capacities of children for learning, which was connected with the education and aptitude of their parents; that the children of people accustomed to arithmetic learned figures quicker than those of differently educated persons; while the children of classical scholars more easily learned Latin and Greek; and that, notwithstanding a few striking exceptions, the natural dullness of children born of uneducated parents was proverbial.

Every observant teacher could doubtless bear witness to the same general facts, and it would be easy to fill a volume with testimonies from various sources illustrative and confirmatory of the law under discussion. Such facts seem to establish beyond question the conviction that the mother has it largely in her power, *by the use of suitable means*, to confer on her child such a *tendency of mind* and

conformation of brain as shall not only facilitate the acquisition of knowledge in any specific direction, but make it morally certain that such knowledge will be sought and acquired.

Not only this, but they indicate also that any desired type of *physical beauty* may be conferred, even where the mother possesses no such quality.

And if this is true in respect to ordinary intellectual abilities and physical features, it must be equally true in regard to extraordinary mental gifts—the qualities of *genius* of every type—and of all *moral* dispositions and *spiritual* tendencies as well.

But it will be noted that in the cases thus far narrated, the moulding power appears to have been exercised merely by accident or chance; that is, without any intelligent purpose on the part of mothers to produce the results that have followed.

Can there be any doubt that the same or similar means, if *purposely* and wisely adopted, and applied with the greater care and precision which enlightened *intention* would secure, would produce under the same law, even more perfect results, and is it not altogether probable that an intentional direction of the vital or mental forces to *any particular portion* of the brain will cause a development and activity in the corresponding portion of the brain in the offspring?

There seems to be no reasonable ground on which these propositions can be denied.

If then, we accept, as many do, the theory of

modern phrenology, and regard the brain as made up of a congeries of organs, which are the instruments of distinct faculties of the mind or soul, it follows that if the mother during gestation maintains a special activity of any one organ, or group of organs, in her brain, she thereby causes a more full development of the corresponding organ or group in the brain of the fœtus, and thus determines a tendency to special activity of the faculties of which such organs are the instruments, in the child.

And further, it is plain that if any one organ or faculty may be thus cultivated before birth, and its activity enhanced for life, so may any other—and so may *all.*

It would seem, then, clearly within the bounds of possibility that a mother, by pursuing a *systematic and comprehensive method*, may give a well-rounded and harmoniously developed organism to her child—and this, notwithstanding even her own defects, which under the unguided operation of hereditary law, are so likely to be repeated in offspring. Or it is within her power to impart a leading tendency in any specific direction that she may deem desirable for a life of the highest usefulness.

In this way, it would seem, may ancestral defects and undesirable hereditary traits, of whatever nature, or however strong, be overcome, or in a good degree counterbalanced by giving greater activity to counteracting tendencies; and in this

way, too, it would appear, may the coveted gifts of genius be conferred.

But some may object that the phrenological theory relative to the division of the brain into a congeries of separate organs is not and cannot be demonstrated. Very well. The fact still remains in every one's consciousness, that our minds or souls possess a variety of powers or faculties, in some sense distinct; and the evidence still holds good that the mother, by the special exercise of any one faculty during the critical period referred to, can and does create a special tendency to the activity of the same faculty in her offspring, which may last throughout its earthly life.

And since it is on the activity, or the lack of it, of the several faculties and propensities of our nature that the characters of individuals depend—their loveliness or deformity, their morality or immorality, their success or failure in life, their happiness or wretchedness here and hereafter—and since the welfare and progress of humanity as a whole is determined by the characters of individuals—and since, again, the tendencies for good or evil inwoven into the very woof and texture of the embryo evidently have greater power in shaping the characters and acts of individuals than all the training and discipline of childhood and youth—this matter of *culture before birth* assumes an importance far above that which pertains to any and all other departments of education. Hitherto it has been least and last in the

estimation of mankind generally. The time must come when THE LAST SHALL BE FIRST.

To recapitulate: We seem justified by present physiological knowledge in stating the law of prenatal moulding to be somewhat as follows: The human embryo (the structural basis of which is probably contributed by the father) is formed and developed in all its parts, even to the minutest details, by and through the action of the vital, mental and spiritual forces of the mother, which forces act in and through the corresponding portions of her own organism. And while this process may go forward unconsciously, or without the mother's voluntary participation or direction, in which case the results are measurably uncertain or chance-determined (or, perhaps, more strictly speaking, shaped by influences extraneous to her own will), yet she may *consciously* and *purposely* so direct her activities as with a good degree of certainty to accomplish specially-desired ends in determining the traits and qualities of her offspring.

In other words, it would seem to be within the mother's power, by the voluntary and intelligent direction of her own forces, in orderly and systematic methods, to both mould the physical form to lines of beauty and shape the mental, moral and spiritual features of her child to an extent to which no limit can be assigned.

The methods by which the tendencies of offspring may be shaped before birth are indicated in a general way by the facts and observations

already set forth. But that this momentous work may be performed with anything like completeness, so that not only each department, physical, mental and moral, shall receive its due proportion of attention, and at the proper time, but also that each specific faculty of the intellect and of the moral nature shall be given the requisite impetus to result in a well-balanced and harmonious character, would seem to require the pursuit of some well-devised plan or system in the application of methods.

This is probably important in pre-natal as in post-natal culture. No one thinks of conducting a common primary school without an *order* of exercises, and such a curriculum of studies as shall, by progressive steps, cover the whole ground desired within the allotted time. If the course of procedure were left to chance, or to the impulse of the moment, it is pretty certain that much would be overlooked and neglected, and much done out of place, and therefore to little purpose. So in the process of embryotic moulding, if left merely to the ordinary action of the laws of heredity, with the chance occurrence of modifying influences, as is usually the case, what else can be expected than that parental or ancestral traits, good or bad, will strongly preponderate in the child, with now and then an erratic variation, desirable or undesirable, and perhaps a sad deficiency of some faculty or quality important to wholeness. Every wise and loving parent must desire to confer on offspring wholeness and soundness in every part.

Besides, if the mother has before her mind a definite plan and purpose, to the execution of which she is directing and disciplining her energies, she will doubtless be thereby measurably guarded and fortified against the often disastrous effects of surprises and sudden emotions.

But it will be apparent to every one that the work of pre-natal culture, however intelligently and systematically undertaken, cannot effect its best results if the mother's attention to the subject is limited merely to the nine or twelve months next preceding birth. Before attempting, then, to suggest a plan for orderly and systematic procedure during the season of gestation, let us first give some attention to the matter of *antecedent preparations*.

Great as may be the effects produced by judicious management during pregnancy, yet these effects must be subject to important modifications by previous life-habits, long-indulged tendencies, weaknesses, diseases of whatever nature, in both parents, and in their ancestors on both sides.

It is manifestly important, then, to the best results, that both our habitual states and our transient impulses should be such as will bless and not curse our offspring—important to have all these sources of influences wholly on the side of nobleness, virtue, and beauty of character in all respects. To this end does it not behoove every one who aspires to the god-like honor of begetting a being in his or her own likeness, to first enter in thorough

earnest upon the work of self-improvement, self-discipline, and moral and spiritual purgation? Is it not incumbent upon all such by no means to attempt or consent to become instrumental in initiating a new life until reasonably sure of not imparting the taint of moral or physical evils to curse its existence? Can any stronger motive to self-improvement be presented to a conscientious mind than this consideration affords? And can any time in life be too early to begin this work?

All should remember that *children have rights*, which are as sacred as can be those of any other beings; and *among the first of these is* THE RIGHT TO BE WELL-BORN.

It hardly need be said, except for the woful thoughtlessness that often exists on the subject, that so momentous an undertaking as the originating and nurturing of a young immortal—a being that is to enjoy or suffer throughout eons of existence, and that is to bless or curse its fellows on earth through unknown generations, largely according to the characteristics enstamped on it by its parents—it hardly need be said that such an undertaking should be left in no avoidable degree to chance or accident. Above all, it should not be (as it so often is) the hap-hazard result of blind passion, or mere pleasure-seeking indulgence. Realizing the august responsibilities involved, both parents should not only act with intelligent forethought and deliberate intention, but surely should make the best preparation in themselves

and their surroundings of which they are capable.

Since "like begets like," on every plane of existence, it is evident that the preparations referred to should include every department of the being. We are told that the women of ancient Sparta exercised in gymnasiums in order to attain the highest bodily vigor, preparatory to the exercise of maternity. That practice, or its equivalent, may well be revived; or better, women from childhood should be taught to practice such physical exercises as will develop and preserve the best bodily health and vigor. It should be remembered that ordinary occupations, even of the more active kinds, exercise but *a part* of the muscles of the body. The whole should be brought into frequent action for the fullest vigor.

But the physical robustness and power of endurance for which the Spartans were noted are by no means all that is desirable in our day. A universal culture is now demanded. The mental, affectional, moral, æsthetical, and spiritual departments of our being require no less development and fullness of expression in us, if we would do our noblest work, and discharge our full duty to our offspring.

But the self-culture from which these result is not the work of a day, or even a year. In fact, the whole previous life is none too long a period in which to prepare for so serious an undertaking as the reproduction of one's self. The earlier, therefore, the young of both sexes can be intel-

ligently instructed in these matters, and impressed with the importance of living for those who may come after them, the better may they become fitted for the highest responsibilities of life.

If the taint of physical disease, of a mental unsoundness, or of moral obliquity, lurks in the system of either parent, it is liable (perhaps not always certain) to be infused into the germ, and thus to be reproduced after its kind.

Some persons have imagined that because the impregnating germ contributed by the male parent is of microscopic dimensions, it matters little what his character or qualities may be. But this opinion is contrary to all evidence, and to the analogies of the animal and vegetable worlds. The potency of spiritual elements or forces is by no means determined by the physical dimensions of their vehicle. While the mother may, no doubt, do much by appropriate management toward modifying and counterbalancing in manifestation the traits, good or bad, of the father, nevertheless the latter evidently furnishes a sort of substratum of character which is difficult, if not impossible, of entire eradication. Hence, in human culture, as in agriculture, good seed is of no less importance than good soil. This being so, the importance, on the part of both parents, of attaining both physical health and mental and moral soundness before reproduction is attempted, will be apparent to every one. It is plain that when once the germinal elements of disease and of moral evils shall have been extirpated

in parents, such elements cannot be transmitted to offspring, and the latter will then be spared the painful processes of purgation which otherwise are rendered necessary. This certainly should be a most potent inducement to every intending parent to seek to attain this condition, if attainable. Of its attainability we will speak further on.

Let us ask ourselves, what right have we to transmit to others—to the dear offspring which every true parental heart yearns to bless with every good, and to guard from every evil—what right have we to inflict on them the ills and weaknesses, the vices and meannesses, which mar and deform our own lives? If we allow the desire for a momentary gratification to overbear all these considerations, and impel us to give origin to a new life regardless of *its* best interests, what else may we expect than that the being thus begotten in our unworthy likeness will, when it comes on the stage of action, prove equally indifferent to our welfare and that of others? Such, alas! is the general characteristic of the children of humanity to-day.

But it will be asked by many doubting readers, Is there practically any help for the existing state of things? Are there reasonable grounds for hoping that parents in general, physically diseased and morally imperfect as they are, may by any process of self-culture, or of spiritual regeneration attain to such a state as that they shall not transmit physical diseases or moral obliquities to their off-

spring? Can the sexual appetite, for example, whose imperious demands are the chief obstacle to such preparatory culture as has been herein recommended, be so regulated by any means as to admit of this culture?

The foregoing are pertinent suggestions, and deserve candid consideration.

In the past so little regard has been paid to the finer laws of *adaption*, temperamental and spiritual, between persons entering the parental relation—so seldom has the sacred right of the mother to choose, in accordance with her own highest monitions, the time and the circumstances under which she would assume the maternal function, been delicately respected—so often, indeed, has she been compelled, or made to believe it her religious duty to accept this function at the husband's imperious desire, even against the vehement protest of both soul and body on her part, causing an aversion, if not a loathing, which quite unfits her for the proper discharge of its duties, and produces most unhappy effects upon the temper and tendencies of her offspring—and so shadowy is the ordinary faith of even Christians in any available help or guidance from superior sources in these important concerns, that the common results furnish little indication of what *might be*, and what *will be* when greater light and wisdom shall have become prevalent relative to these matters.

Especially should the husband refrain from ever intruding, by either demand or solicitation, *against*

the intuitions of the partner. All such intrusions are outrages of the most flagrant character, the same in essence as positive physical violence, and the same within as without the legal marriage relation. Offspring begotten when any degree of reluctance or want of preparation exists on the part of the mother, are robbed of a portion of their birthright, and to that degree incapacitated for the full enjoyment of existence. That birthright includes a full and loving welcome to the world. Without this, what a pitiable object is a child—virtually orphaned and outcast from its earliest heart-throb, liable to be followed through life by a sense of homelessness and friendlessness, a life-long mourner in a vale of tears! But a child wisely desired, intelligently prepared for, begotten in sweet mutual love, properly cultivated in embryo, and at length joyfully welcomed to loving arms, is an object of interest and joy to all humanity.

Notwithstanding all the sad experience of common life, in suffering the ills entailed upon us by our progenitors and in entailing the same upon our offspring, there are reasons for the firm conviction that provision exists in the constitution of things for the overcoming of hereditary evils, so far, at least, that, if transmitted at all, it shall be in only an ameliorated instead of an intensified form ; if, in fact, they may not be entirely eradicated in ourselves. There is help at hand to aid us in this work, if we sincerely seek and intelligently apply the agencies within our reach.

First, it seems evident, on careful reflection, that the great forces of nature, the life-currents of the universe, tend to health rather than to disease—to physical, mental and moral soundness, rather than to their opposites. Otherwise deterioration, degradation, must have been the constant tendency of the race in all the past, and utter extinction must long ere this have been reached. On the contrary, it is generally conceded that, notwithstanding all the ignorance, disease, vice, and corruption that have existed through all historic time, an actual, though slow, improvement has taken place in both the physical and moral status of the human race at large within the historic period.

The general tendency of nature to health is also seen in the recuperative force of nature—that power present in all living organisms which tends at once to heal every wound and to cure every disease, and which accomplishes these results when not thwarted by obstacles too great to be overcome. Drugs and potions never heal; the most they do is to facilitate the operations of this inherent recuperative force.

In other words, *it appears that health and moral excellence are normal to human beings, while disease and evil are abnormal.* The former are in harmony with the great forces of the universe, while the latter are antagonistic to these forces, whose constant tendency is to overcome and remove them.

Now it has been demonstrated, in the scientific propagation of animals, that abnormal character-

istics are far less persistent in transmission than are normal ones. The tendency of nature's forces is to maintain the normal type. The same law doubtless obtains in the human species. The law that "like begets like" is thus subject to a modifying principle, and one that is full of hope for suffering humanity. Not alone do the evils of our nature tend to reproduce themselves, but by virtue of this natural reversion to what is normal, healthful, improving, the goods and excellences have a still better chance of survival—*provided adverse influences can be kept in abeyance, and that the salutary life-currents of the universe shall be unobstructed.*

How, then, may this be done? The answer is: First, by *right living.*

We must cease to nourish the germs of physical disease and moral evil implanted in us by our progenitors, and avoid generating more of the same in ourselves. To do this we must cease those unphysiological habits of diet and regimen in general, and those impure habits of thought and feeling, in which such germs have their origin. In other words, *we must learn the laws or conditions of physical and moral health, and conform our lives to them.*

To be more specific, we must cease to ruin our stomachs and destroy our digestive powers by the use of indigestible hot bread, pastry, greasy food, complicated and highly spiced dishes, and all the many abominations of modern un-hygienic cookery. We must abstain from slop-fed swine's flesh, that

prolific generator of scrofula and *trichinæ*, and from the flesh of all animals slaughtered in diseased conditions, or treated after slaughtering in such a manner as to fill it with disease-producing germs; must also abjure those common narcotic and alcoholic beverages, which, under the guise of stimulating, only weaken and lower the tone of the nervous system, creating a demand for more and more of the same deceptive stimuli, until the unfortunate victim comes to imagine them "necessaries of life." We must beware, too, of inhaling the foul atmospheres of unventilated apartments, crowded assemblies, and miasmatic localities, which are full of morbific germs. And, on the other hand, we must learn to content ourselves with the simple, nutritious and healthful foods, chiefly from the vegetable kingdom (including, of course, the cereals, fruits and nuts), which experience shows most conducive to bodily soundness, mental vigor and moral purity; we must be much in the open air; exercise duly all parts of the muscular system; dress *rationally* instead of *fashionably;* bathe often and thoroughly, in order to rid the system of effete matters which become poisonous by retention in the pores of the skin; and, in short, must practice all those rules of hygiene which sanitary science has found requisite to the highest bodily health. So much, at least, must commend itself to the good sense of every reader.

The matter of dress, above alluded to, is of far greater importance to general right living—not

merely during the period of pregnancy, but through all the previous life—than most people think; so great, indeed, as to justify further remark in this connection. Any method of compressing the body about the waist, chest, or abdomen tends, as every one can perceive, to crowd the abdominal viscera down upon the delicate parts located in the pelvic region, producing irritation, inflammations, and various "female weaknesses." This devitalizes the organs of reproduction, and in greater or less degree unfits them for their proper function when called into use. It also greatly increases the labor and dangers of child-bearing. Besides, such compression, by either sex, interferes with the free circulation of the blood, tending to congest the pelvic organs, and thus to stimulate inordinate sexual excitement, leading to wasteful excesses. These tendencies are further aggravated by the wearing of an excessive amount of clothing about those portions of the body, as often required by fashion's dictates, keeping them at too high a temperature. Such fashions are unnatural and irrational, and will be discarded by all who are seeking a true life.

It is plain to be seen that one who carefully regards these conditions of health stands in a far different relation to the life-giving, health-imparting forces of the universe from that occupied by one who, through a disregard of these conditions, is constantly thwarting the recuperative tendencies of nature, and is nourishing and adding to the

morbid proclivities derived from ancestry. The former is co-operating with the beneficent forces of the universe on the side of health and improvement; the latter is continually antagonizing the same forces on the side of disease and depravation. In the former the tendencies to health are likely to become positive or ascendant, and hence more liable to be transmitted; in the latter the proclivities to disease are kept in such constant activity that they are almost sure to reproduce themselves in offspring, and often with intensified force.

But correct habits of diet and regimen are not the whole of right living. *Thought* and *feeling* should also be pure and elevated. There can be no question in minds well informed but that impure and unkind thoughts, debased, selfish and malevolent feelings cherished by any one, no matter how secretly, generate a subtle poisonous virus, which envelopes the person, and is more or less imparted to all who come in contact. Persons of keen and pure sensibilities often scent these impure and malignant atmospheres, and instinctively shrink from their possessors, they may not know why. There are good reasons for believing that many physical diseases, or at least morbid tendencies, as well as moral perversities, have their origin in the subtle, malign influences of impure thought and evil passion. At all events, it is well known that cheerful good-will and generous affections tend to promote health of body and mind in their

possessor, and all about him; while selfishness, hatred, revenge, and the like, tend in the opposite direction. All right and pure emotions are doubtless in harmony with the life forces of the universe, and thus invite their salutary action upon the whole system; while impure and malevolent feelings are discordant with nature, repellant to her divine forces, and conducive to disorder and misery.

If the foregoing suggestions are well founded, then there is *hope for all*, based in the very constitution of things. Improvement for the individual and for the race is possible, and that without limit. The grand energies of the universe are in its favor. In our ills and weaknesses, our conscious basenesses and evil proclivities, inherited though they may have been from a long line of ancestry, we need not lie prone and helpless, with no alternative (except in rare instances) but either to transmit these hateful qualities to our offspring, or to refrain from the supreme joy of reproducing ourselves.

Should such preparations for parentage as have been suggested in preceding pages be in any good measure attained, it is probable that results of a very desirable character would be realized without recourse to any detailed plan of embryo culture as outlined in what is to follow. But yet it is apparent that if these are succeeded by the wise and judicious use of such further means as are within the power of parents, and especially of mothers during gestation, still more complete results may be assured.

The importance of *order* in the method employed has already been indicated. What that order shall be, the mother may doubtless infer, in a general way, by observing the order in which the several classes of faculties naturally unfold and arrive at maturity after birth, during the periods of childhood, youth, etc. Let us then attempt a classification of human instincts and faculties in the general order of their development. This appears to be somewhat as follows:

First. The Vital and Self-Preservative Instincts, which form the basis of individual existence, are the earliest to manifest themselves. The infant simply eats and grows.

Second. The Domestic and Social Affections ordinarily come next into prominent activity. The child begins to love its parents and caretakers.

Third. The Perceptive and Observing Faculties, with which are associated the Retentive and Recording, are next markedly developed. The child observes and remembers.

Fourth. The Constructive and Beautifying Faculties next display themselves. The child shows a disposition to make things, and to ornament.

Fifth. The Directive and Regulative Faculties, including the reflective intellect and the moral powers, come into activity. The youth begins to reason, and to feel strongly the force of moral obligations.

Sixth. The Humane or Philanthropic impulse asserts its sway; and,

Seventh. The Aspirational, Worshipful, or Upward-looking tendency usually comes latest to maturity.

It is by no means claimed that human development in any case follows strictly this order, nor that it should be followed by mothers in any such rigid way as to exclude all attention to any one department out of the course named. On the contrary, the several steps or stages will merge more or less into each other, and some exercises will doubtless be at all times in place. But it is plainly out of natural order, for instance, to stimulate the activity of the reasoning faculties before the vital forces are well established, or even before the perceptive or observing powers have been duly cultivated. Such a process would be in reverse of the order of nature, and its tendency is to produce physical weaklings and intellectual dreamers, who incline to ignore the solid facts of existence and live in the regions of speculation. A vigorous body is desirable as the basis of a vigorous mind, and habits of accurate observation are an essential pre-requisite to sound reasoning.

Again, it is evident that in any effort by a mother to cultivate her offspring in embryo through her own mental and physical action, she needs to give more especial attention to those desirable qualities, faculties or tendencies which may be deficient in herself, or in the father, and most

especially such as may happen to be deficient in both. Those powers whose activity is in excess in either parent, and those also whose activity is spontaneous and easy, are likely to be transmitted without special effort. *The more difficult it is, then, to exercise any desirable faculty in either parent, the greater the need of its exercise in the mother during gestation*, in order that the offspring may not suffer from the deficiency.

To give specific directions for the culture of each and every faculty, when deficient, would extend this chapter far beyond its proposed limits, but a few general suggestions will enable the intelligent reader to clearly apprehend the method, and to make the application as required in the individual case.

Every one can readily understand that any oft-repeated exercise of muscle or of mental faculty (unless over-done) tends to develop and strengthen such muscle or faculty. It does this in the mother, and, if the law of fœtal moulding has been correctly stated in the foregoing pages, it must have the same effect through the mother upon the embryo. For example, if the mother (at the proper stage in pregnancy) takes care to exercise her own muscles freely by walking, light gymnastics, bathing, etc., the probabilities are, other things being favorable, that she will thereby not only improve her own health, but at the same time confer upon her child a vigorous muscular system. If she, at the proper time, exercises her

mind somewhat persistently, for example, in reckoning or calculating numbers, she will thereby increase her own arithmetical faculty, and simultaneously increase the molecular deposits in that part of the fœtal brain which is the organ of *calculation*, according to modern phrenology—at all events will be likely to confer upon her child the power to become a good arithmetician. If the mother spends any considerable portion of her time in philosophic study or thought, in efforts to understand the "whys and wherefores of things," she thereby exercises and expands her own cause-discerning faculty (*Causality*), and insures its activity in her offspring. So, if she practices thoughtful and unselfish kindness toward those about her, and is benevolent to the needy and suffering, she enstamps the same noble trait (*Benevolence*) upon the unborn; and if she at all times firmly adheres to the right because it is right, she keeps her own conscience ever clear, and imparts to the coming one that priceless quality, *Conscientiousness*. So of all the other faculties.

In short, reading, thought, conversation or any employment which occupies the mind in any special direction, and thus calls into prolonged exercise any specific faculty or set of faculties in the mother, must tend to modify the mental and cerebral development of the embryo in such a way as in all probability will determine, to a large extent, its capacities and tendencies in all after life.

The whole matter is thus simple and comprehensible to the most ordinary capacity

Where any one faculty or tendency is in excess of a well-balanced character, in either of the parents, and deficient in the other, it may reasonably be expected that the excess on the one side may be counterbalanced by the lack on the other—except when, as is sometimes the case, one parent overwhelmingly preponderates over the other in imparting the characteristics of the child—a result due, perhaps, to the possession of greater physical or mental vigor at the time of inception.

Where the same faculties or tendencies are in excess in both parents, the probabilities are that the excess will be increased in the offspring to the extent, perhaps, of creating a deformity, or an undesirable one-sidedness of character. In such a case, the propriety of restraint, instead of culture, would seem to be apparent. But it is suggested that such restraint may best be sought indirectly; that is, by special efforts to cultivate and exercise the opposite or counterbalancing faculties, rather than to attempt repression by direct exercise of the will on the excessive tendency. For example, should the selfish proclivities or passions tend to inordinate activity, endeavor to cultivate and exercise more fully the faculties classed as Directive and Regulative—that is, the Reasoning powers, the Conscience and Benevolence. This will be leveling *up* instead of *down*, thus making more of the whole man or woman by enlarging the better side.

Besides, it is probable that fixing the mind upon any particular faculty or propensity, in an effort to repress its action by direct will-force, may tend, by sending the vital fluids to the cerebral organ of such faculty, to increase rather than diminish its activity; whereas, the drawing of these fluids to other parts of the brain, by increasing the activity of the latter, will naturally lessen the action in those which it is desirable to repress. This, doubtless, furnishes the reason why efforts to overcome inordinate appetites by force of will are so seldom successful.

Where deficiencies exist in the same faculties in both parents, of course there will be required more assiduous attention to the means of culture by the mother, if she would have these deficiencies supplied, and her offspring saved from the disabilities and misfortunes that are likely to result.

If the foregoing suggestions are at all in the right direction, it plainly follows that it behooves all prospective parents, and especially mothers, who would confer upon their children healthful and well-balanced organisms, to first thoroughly know themselves. Not only should they intelligently understand their own respective physical conditions, as regards healthfulness, adaptation of temperaments, constitutional tendencies, etc., but also they should have a just estimate of their own mental powers and moral characteristics in all particulars. And since few persons are competent to know themselves accurately in either of the above

named respects, it is well to consult with intelligent and judicious friends, or with competent professional advisers, if such can be found, who are skilled in the detection of physical, mental and moral characteristics, and will faithfully point out both defects and redundances. It may be true that there are few persons now to be found in any of our communities who are fully qualified to give needed advice in these momentous matters; but it is believed that as public attention shall be turned in this direction, and the want become felt, such advisers will appear.

The specific measures which seem adapted to the several successive stages into which embryo culture may be divided, in accordance with the suggestion already made regarding an orderly method of procedure.

First stage.—It seems scarcely to admit of question that the first thing to be done, in the order of time, is to secure to the new immortal the basis of a good physical organization, with strong vital powers. If the parents, and especially the mother, have given proper attention to their own personal preparation in all respects, as hereinbefore suggested, a good beginning will have been made. But the mother should endeavor by all means to maintain throughout the whole period of gestation the best possible condition of bodily health and vigor. Neither too much labor nor care, nor too little, should be undertaken. During the earlier months, while the foundations, so to speak, of the

child's physical constitution are being laid, open air exercise, gymnastics, bathing, riding, travel, with the best diet, proper dress, cheerful companionship—in short, everything that will contribute to the highest physical vigor—should be availed of as far as practicable. At later stages a greater amount of repose and seclusion is naturally sought, and travel and the more active forms of exercise cannot so well be participated in.

The question, what constitutes the best diet during pregnancy, will be fully discussed in another chapter, and cannot be treated at length here. The good sense of every reader will suggest that the diet ought to be regulated, not by custom or fashion, or the dictates of a perverted appetite, but by a thoughtful and intelligent consideration of what is best adapted to supply the needs and promote the healthy functions of the organism, with special adaptations to the circumstances of the case.

During the earlier stages of pregnancy, as well as at all subsequent periods, it is desirable that the mother have at hand, for frequent contemplation, some of the best works of art, in statuary, or pictures, or both, as models of the beautiful and graceful in form, and of the amiable and noble in expression. Perhaps some one admired figure may be chosen, to be copied by the mother's wonderful electrotyping power in her living work of art; but care should be taken that it be one in which *goodness* as well as physical beauty is bodied forth.

In this is to be found one of the noblest uses of art; and there can be no doubt that the works of the great masters have had more effect than the world imagines in producing and multiplying forms of beauty and manliness through impressions made on the minds of matrons.

It is said that travelers in Italy, that land of paintings and sculpture, are often struck with the frequency with which the lovely features of the Madonna are to be seen in the faces of children of even the uncultured peasantry. When it is remembered that almost every church and chapel in that country is provided with a representation of a Virgin and Child, from the hand often of some master of the noble art, and that these pictures are regarded with devout reverence by the common people, it is easy to see whence come those beautiful faces of Italian children.

The several specific instincts or propensities of the Vital and Self-Preservative group, included in our first class, are, according to the phrenological system, termed as follows: 1, *Vitativeness*, or love and tenacity of life; 2, *Alimentiveness*, desire for an enjoyment of food; 3, *Destructiveness*, or executive power, ability to overcome obstacles; 4, *Combativeness*, or self-defense; 5, *Acquisitiveness*, or disposition to own and accumulate; 6, *Secretiveness*, tact, ability to keep one's own counsel.

This analysis and these definitions, let it be remarked, may be neither strictly accurate nor exhaustive, yet they may answer practical purposes

until better can be furnished. And the same remarks apply to all the groupings and definitions to be hereafter given. The phrenological analysis and nomenclature of instincts and faculties is used here, not because it is entirely satisfactory, but because it appears better adapted to the purpose in view than any other which the author has met with.

It should be noted that none of the propensities above specified, when rightly defined, can be dispensed with in a fully rounded character. They are not evil in themselves, nor are their organs (if such exist) "bad organs," as some have supposed. It is their overplus, or over-action as compared with that of others, that is bad. A deficiency in any one of these basic instincts of human nature constitutes in that particular a weak and deficient character.

Second stage.—Next in order after the vital instincts, and to some extent simultaneous with them, comes the development of the domestic and social affections, or the loves. These precede, in a general way, the manifestations of intellect. That is, the child ordinarily *loves* before it *reasons* to any extent. It would seem appropriate, therefore, that the mother, before applying herself to special exercises for intellectual culture, should see to it that any deficiencies that may exist in the affectional department are provided against, as far as may be, by appropriate self-training. If her own personal affections are kept in lively and well-

balanced exercise, she may expect that her offspring will be well endowed in this department.

The several divisions of the affectional group of faculties recognized by phrenologists are the following: 1, *Amativeness*, or attachment to the opposite sex; 2, *Conjugality*, desire to pair, or love for the partner; 3, *Parental Love* (philoprogenitiveness), or love of children and pets; 4, *Adhesiveness*, (friendship), attachment to friends; 5, *Inhabitiveness*, love of home and country.

Third stage.—Next in natural order of prominent activity, appear to come the observing or perceptive powers, intimately associated with which are the communicative and the retentive or recording faculties. These, as designated by phrenologists are: 1, *Individuality*, or power to individualize or distinguish and separately observe objects (the investigating faculty); 2, *Form*, or perception of shapes, outlines, memory of faces, etc.; 3, *Size*, the power to notice and remember dimensions; 4, *Weight*, or perception of forces; 5, *Color*, appreciation and love of colors, tints, etc.; 6, *Order*, love of arrangement, system; 7, *Calculation*, or perception of numbers and their relations (the arithmetical faculty); 8, *Eventuality*, memory of events, facts, dates, etc. (the historic faculty); 9, *Locality*, observation and memory of places, scenery, directions, etc. (the geographical faculty); 10, *Time*, sense of duration, capacity for punctuality; 11, *Tune*, the musical faculty; and 12, *Language*, or the power of verbal expression. To these are

closely related the five external senses—*feeling*, *seeing*, *hearing*, *taste* and *smell*.

Deficiency in any one of these faculties is not desirable—in some it is a sad misfortune.

Exercise for the culture of the observing and perceptive faculties, it is suggested, may properly commence about the third month; and it is repeated that special attention should be given to those which are lacking, or which are least inclined to spontaneous exercise, in the mother, or in both parents.

Aids in the systematic culture of these faculties may doubtless be obtained from modern elementary works on object teaching for primary schools and kindergartens, The defects of such works, or perhaps their entire absence, may be readily supplied by intelligent mothers, when they once understand the thing to be done, and its importance.

Fourth stage.—The next group of faculties, in order of normal development in life, embraces what have been termed the constructive and beautifying powers, sometimes designated as the semi-intellectual group. These in phrenological parlance are named: 1, *Constructiveness*, or ingenuity (the building and mechanical faculty); 2, *Ideality*, love of the beautiful and refined (the poetical faculty); 3, *Sublimity*, sense of the grand and sublime; 4, *Mirthfulness*, or love of pleasantry, wit. Under the same general division may be classed: 5, *Imitation*, or the power to copy, represent, mimic; and 6, *Suavity*, or agreeableness, blandness.

Closely associated with this group are also the Reasoning and Reflective, and the Moral and Regulative faculties, all of which may be classed together as the Directive and Regulative group. These include what are phrenologically termed: 1, *Causality*, or power to apprehend first principles, to trace causes, etc.; 2, *Comparison*, or power to analyze, classify, and generalize; 3, *Human Nature*, or sagacity in discernment of character; 4, *Cautiousness*, or prudence; 5, *Continuity*, power of consecutiveness or application; 6, *Approbativeness*, regard for the good opinion of others, ambition; 7, *Self-Esteem*, or self-respect; 8, *Conscientiousness*, love of right and abhorrence of wrong; and 9, *Firmness*, or perseverance.

Nothing need be said, to any intelligent reader, as to the importance of each and every one of these faculties, in due exercise, to the formation of a well balanced or perfect character; and the proper methods of their culture, respectively, are to some extent suggested by the names given them.

Special exercises for the development in the fœtus of the brain organs through which these faculties may manifest themselves, would seem to be in order after those adapted to the preceding group—say about from the fifth to the seventh month.

Fifth stage.—In the last and highest group of human faculties—last and highest whether considered with reference to their value in human char-

acter, or the period at which they ordinarily arrive at maturity in the individual and in the race—we find what may be classed as the Humanitarian or Beneficent, the Religious or Worshipful, and the Aspirational, Spiritual, or Upward-Looking powers. These are designated as: 1, *Benevolence*, philanthropy, or universal love; 2, *Veneration*, reverence or worship; 3, *Hope*, or cheerful expectancy; 4, *Spirituality*, aspiration, prescience, faith, or power to apprehend spiritual realities, and to lay hold on unseen verities.

These constitute, indeed, the crowning attributes of human nature. No character can be regarded as complete and symmetrical in which they are not in full and harmonious exercise. If any of this group, as of the preceding, are deficient in either parent, the expectant mother cannot discharge her full duty to the unborn unless she make earnest efforts to supply the deficiency by self-culture before its birth. The definitions of the several faculties as given above will suggest the nature of the exercises by which such culture may be attained.

While the faculties of this group should unquestionably be at all times kept in full exercise for the parent's highest good, yet their special culture may well occupy attention during the final weeks of the gestatory period—say from the seventh to the ninth month, inclusive.

Things to be avoided.—The prospective mother, in her efforts to improve herself and to worthily

endow her offspring, should by all means avoid anxiety, over-carefulness, an oppressive fear of mistake, and a painful sense of duty. These feelings would tend to enstamp upon the coming one an over-anxious, foreboding, painfully-careful disposition, than which hardly a greater evil can be entailed. On the contrary, everything should be done with a cheerful delight, because its purpose is to confer blessings on an object of the tenderest affection, and it should be done with a joyful confidence as to the result. No greater blessing can be conferred than that of a cheerful, hopeful, helpful disposition, that delights in bestowing good upon others, and that meets all the vicissitudes of life with a calm trustfulness. And there can be no doubt that such characteristics are determined in a large degree by the mother's state during gestation.

It hardly seems necessary in this connection to advert to the importance of avoiding all exercise of malevolent feelings, such as anger, envy, jealousy, hatred, revenge, covetousness, or wrong desire of any nature, since all readers of the foregoing pages must understand the danger that such emotions, if indulged, may implant in the embryo the subtle germs, from which will grow in after years the bitterest fruits.

Another thing important to be avoided, as far as practicable, by the mother, is the presence of disagreeable and unprofitable associates of either sex. The untoward mental and moral influence that may be excited through the mother upon the

forming child, by the frivolous and unseemly conversation of persons unappreciative of the nobility and grandeur of the work which occupies her—the effect of coarse, indelicate speeches and the like—can be readily understood. But beyond this, there may be persons whose *atmospheres* are repugnant, and from whom the matron feels an instinctive shrinking. On no account should she allow herself, or be permitted by others, to be tortured by the presence of such repulsive individuals, whether as companions or domestics. There is reason to believe that the disagreeable characteristics of such repugnant persons are sometimes, by an occult law of transfer, enstamped upon offspring. At all events their influence cannot be otherwise than detrimental to the best devlopment of the embryo.

It scarcely need be said that the father should take equal interest with the mother, for he is equally concerned in the object in view, namely, the production of noble and worthy offspring. Having given due attention to his own antecedent preparations, he may perform essential service in the proper development of the embryo before birth. He can accompany and assist the mother, to some extent at least, in the various exercises appropriate to the successive stages of its unfolding, provide the proper facilities therefor, so far as practicable, and he can lend his sympathy and encouragement at every step, guarding her against all untoward conditions or influences, and

thus helping to secure such a result as will be a source of mutual joy forever.

If on the contrary, he manifests indifference, neglect, or untoward conduct of any kind, he may thwart and defeat the best efforts the mother can put forth, and may excite in her such feelings of depression, disappointment, grief, perhaps of repining, aversion, or disgust, as shall enstamp upon the child she is bearing characteristics which will prove a life-long burden or a curse. Many a child has been impressed before its birth with repugnance and dread toward its father, caused by his selfish or harsh treatment of the mother during this critical period, which can never be fully overcome in after life. Such a child is robbed of its birthright in paternal affection, and such a father robs himself of the bliss of filial love and confidence.

In addition to the traits of a well-balanced character, it is doubtless desirable that parents should implant in each child a tendency to and aptitude for some special occupation or form of usefulness. Such an inborn tendency and aptitude greatly enhance the probabilities of success in any pursuit that may be followed in life; and the want of it often results in failure, poverty, vagabondism, and crime.

But how may special tendencies and aptitudes be imparted? The facts and suggestions already submitted clearly indicate the methods. Let the parents, during the ten or twelve months ante-

cedent to the birth of a child, interest themselves in, and prominently but cheerfully devote their minds to the occupation, profession, or department of human interest to which they wish to destine the child. If they cannot practically engage in the chosen occupation, they may yet think, talk, read and study about it, and perhaps take opportunities to witness the labors of others who are engaged in it, and thus become conversant with its details. This, if done with pleasure and delight, can hardly fail of producing the desired result. In addition to all this is the power of aspiration. Let the mother cherish strong aspirations, breathed in earnest prayers, that her child may be what she desires. The psychological influence of such aspirations at such a time cannot reasonably be questioned. No doubt, in the condition of receptivity or impressibility resultant from yearning aspiration, or some other adequate cause, in one or both parents, at the time of inception or subsequently, is to be found the explanation of many cases of the occasional endowment of offspring with qualities far superior to what either parent has possessed.

In so important an undertaking as the initiation of an immortal being, doubtless it is well to have due regard to times and seasons. Though the matter is one of much delicacy, yet these pages would be incomplete without some reference to it. In the animal kingdom we observe that, as a general rule, instinct leads to the bringing forth of

young in the springtime, or in early summer. That seems to be Nature's chosen and orderly time for the ushering in of new life in all departments. Probably human beings may well give heed to an intimation so broadly given.

To what grander achievement can either woman or man aspire than to be an artist in that noblest of arts, the moulding and rearing of immortal beings? Fadeless renown has crowned the efforts of gifted sculptors and limners in the past to portray the perfect ideal of the "human form divine." That field of high art is open to comparatively few competitors—those fortunately endowed with rare genius. But there is a field of higher art, worthy of still greater honor—as much greater as the living perfect man is better than a senseless image. And this field is open to almost every one, even the humblest, through the means set forth in the foregoing chapter. Yes! the godlike privilege is brought within the reach of the great mass of those now entering the prime of manhood and womanhood, as well as of those who have not yet passed its noon-time, of *endowing with the noble gifts of genius their own sons and daughters*, however lowly born.

CHAPTER IX.

PARTURITION WITHOUT PAIN.*

For ages, womankind has submitted, not always uncomplainingly, it is true, but evidently without hope of any redemption from the pains and perils of maternity. The object sought in this chapter is to suggest such measures as will afford an assurance of safety and a mitigation, if not complete redemption, from such suffering. If woman was made for maternity, then it is evident that the proper exercise of this function should be attended by the highest health, enjoyment and happiness. That it is not so in any case indicates that something is wrong, and that the kindly purpose of Nature has been thwarted at some point. There is little question that proper attention to the laws of health, as regards diet, regimen, clothing, etc., will secure to any well-organized and well-mated woman exemption from most, if not all, of the sufferings and dangers now usually considered incident to child-bearing.

Doubtless, woman must endure some burdens and suffering to the end of time, but the accounts given by travelers of the marvelous ease, quick-

*The above is the title of a little book by M. L. Holbrook, M. D.

ness, painlessness and freedom from disablement with which many savage women bring forth children, are well known. There is abundant reason for believing that among some savage races neither pregnancy nor labor interrupts the usual avocations and movements of the mother, except, perhaps, for an hour or two at the birth itself. It is not, however, so generally known that the records of medical observations contain accounts of a number of cases of almost equally complete contradictions of what is commonly considered a primal and universal curse upon humanity.

Dr. Tuke, a high authority, says: "Parturition itself, according to the general testimony of travelers interferes much less and for a shorter period with the healthy action of the body and mind among savage nations, than among the luxurious daughters of artificial life."

Dr. Gaillard Thomas says: "Neither appreciation of, nor desire for physical excellence sufficiently exists among refined women of our day. Our young women are too willing to be delicate, fragile, and incapable of endurance. They dread above all things the glow and hue of health, the rotundity and beauty of muscularity, the comely shapes which the great masters gave to Venus de Medicis and Venus de Milo. All these attributes are viewed as coarse and unladylike, and she is regarded as most to be envied whose complexion wears the livery of disease, whose muscular development is beyond the suspicion of *embonpoint*,

and whose waist can almost be spanned by her own hands. As a result, how often do we see our matrons dreading the process of child-bearing, as if it were an abnormal and destructive one; fatigued and exhausted by a short walk, or ordinary household cares; choosing houses with special reference to freedom from one extra flight of stairs, and commonly debarred the one great maternal privilege of nourishing their own offspring. These are they who furnish employment for the gynecologist, and who fill our homes with invalids and sufferers."

Dr. Dewees says: "*Pain in childbirth is a morbid symptom*; that it is a perversion of nature caused by modes of living not consistent with the most healthy condition of the system, and that such a regimen as should insure such a completely healthy condition might be counted on with certainty to do away with such pain."

The great English scientist, Professor Huxley, says: "We are indeed fully prepared to believe that the bearing of children may and *ought* to become as free from danger and long debility to the civilized woman as it is to the savage."

The following paragraphs, from one of the essays in Dr. Montgomery's classical work on Pregnancy, are interesting, as giving circumstantial details of cases in illustration of the belief in the practicability of painless parturition:

"In a letter to me, Dr. Douglas states that he was called about six A. M., September 26, 1828, to attend a Mrs. D., residing on Eccles street.

"On his arrival he found the house in the utmost confusion, and was told that the child had been born before the messenger was dispatched for the doctor. From the lady herself he learned that, about half an hour previously she had been awakened from a natural sleep by the alarm of a daughter about five years old, who slept with her. This alarm was occasioned by the little girl feeling the movements, and hearing the crying of an infant in the bed. To the mother's great surprise she had brought forth her child without any consciousness of the fact. A lady of great respectability, the wife of a peer of the realm, was actually delivered once in her sleep; she immediately awakened her husband, being alarmed at finding one more in bed than was before. I have elsewhere mentioned the case of a patient of mine who bore eight children without ever having labor pains. Her deliveries were so sudden and void of sensible effort that in more than one instance they took place under most awkward circumstances, but without any suffering."

Dr. Holbrook says: "Those women of savage nations who bear children without pain, live much in the open air, take much exercise, and are physically active and healthy to a degree greatly beyond their more civilized sisters. These instances tend directly to prove that parturition is likely to be painless in proportion as the mother is physically perfect, and in a perfect condition of health. They certainly tend even more strongly

to prove that pain is not an absolutely necessary attendant of parturition."

Elizabeth Cady Stanton, in a lecture to ladies, thus strongly states her views regarding maternity and painless parturition:

"We must educate our daughters to think that motherhood is grand, and that God never cursed it. And the curse, if it be a curse, may be rolled off, as man has rolled away the curse of labor; as the curse has been rolled from the descendants of Ham. My mission among women is to preach this new gospel. If you suffer, it is not because you are cursed of God, but because you violate his laws. What an incubus it would take from woman could she be educated to know that the pains of maternity are no curse upon her kind. We know that among Indians the squaws do not suffer in child-birth. They will step aside from the ranks, even on the march, and return in a short time bearing with them the new-born child. What an absurdity, then, to suppose that only enlightened Christian women are cursed. But one word of fact is worth a volume of philosophy; let me give you some of my own experience. I am the mother of seven children. My girlhood was spent mostly in the open air. I early imbibed the idea *that a girl is just as good as a boy*, and I carried it out. I would walk five miles before breakfast, or ride ten on horseback. After I was married, I wore my clothing sensibly. The weight hung entirely on my shoulders. I never compressed my

body out of its natural shape. When my first four children were born, I suffered very little. I then made up my mind that it was totally unnecessary for me to suffer at all; so I dressed lightly, walked every day, lived as much as possible in the open air, ate no condiments, and took proper care of myself. The night before the birth of the child I walked three miles. The child was born *without a particle of pain.* I bathed it and dressed it myself, and it weighed ten and one-half pounds. The same day I dined with the family. Everybody said I would surely die, but I never had a moment's inconvenience from it. I know this is not being delicate and refined, but if you would be vigorous and healthy, in spite of the diseases of your ancestors, and your own disregard of nature's laws, try it."

An abstemious diet, during the *early* period of pregnancy, is essential, as the habit of body, at that time, is usually feverish and inflammatory.

A lady who is *enciente* may depend upon it that the less stimulants she takes at these times the better it will be both for herself and for her infant; the more kind will be her labor and her recovery, the more vigorous and healthy will be her child.

It is a mistaken notion that she requires more nourishment during early pregnancy than at any other time; she, if anything, requires less. It has often been asserted that a lady who is pregnant ought to eat very heartily, as she has two to provide for. When it is taken into account that during

pregnancy she ceases to menstruate, and that there is no drain on that score; and when it is also considered how small the ovum containing the embryo is, not being larger for the first two or three months than a hen's egg, it will be seen how futile is the assertion. A wife in early pregnancy does not require more than at another time; if anything, she requires less. Again, during pregnancy, especially in the early stage, she is unusually more or less sick, feverish, and irritable, and a superabundance of food would only add fuel to the fire, and would increase her sickness, fever, and irritability. Moreover, she frequently suffers from heartburn and from indigestion. Can anything be more absurd when such is the case than to overload a stomach already loaded with food which it is not able to digest? No, let Nature in this, as in everything else, be her guide, and she will not then go far wrong! When she is further advanced in her pregnancy—that is, after she has quickened—her appetite generally improves, and she is much better in health than she was before; indeed, after she has quickened, she is frequently in better health than she has ever been. The appetite is now increased. Nature points out that she requires more nourishment than she did at first, for this reason; the fœtus is now rapidly growing in size, and consequently requires more support from the mother. The food of a pregnant woman should now be increased in quantity, but let it be both light and nourishing.

The food taken cannot be too plain; highly seasoned dishes ought to be avoided. Roasted apples, ripe pears, raspberries, strawberries, grapes, tamarinds, figs, Muscatel raisins, stewed rhubarb, stewed or baked pears, stewed prunes, the inside of ripe gooseberries, and the juice of oranges, are particularly beneficial; they quench the thirst, open the bowels, and help to make parturition easy and painless.

Within the past few years the theory has been advanced by physiologists that if a pregnant woman subsists upon food, the elements of which *do not* nourish and develop the osseous tissue, the cranial structure will thereby be rendered pliable, and labor thus be made comparatively easy and painless. In 1841 this idea was first advanced, in a small pamphlet published by a Mr. Rowbotham —a chemist, of London. His wife, in two previous confinements, had been a great sufferer, and he feared she would not survive the third.

His theory was that, "in proportion as a woman subsists during pregnancy upon food that is free from earthy and bony matter, will she avoid pain and danger in delivery; hence, the more ripe fruit, acid fruit in particular, and the less of other kinds of food, particularly of bread or pastry of any kind, is consumed, the less will be the danger and suffering in childbirth.

"The subject of this experiment had, within three years, given birth to two children, and not only suffered extremely in the parturition, but for

two or three months previous to delivery her general health was very indifferent, her lower extremities exceedingly swollen and painful; the veins so full and prominent as to be almost bursting; in fact, to prevent such a catastrophe, bandages had to be applied; and for the last few weeks of gestation, her size and weight were such as to prevent her attending to her usual duties. She had on this occasion, two years and a half after her last delivery, advanced *full seven months* in pregnancy before she commenced the experiment at her husband's earnest instance; her legs and feet were, as before, considerably swollen; the veins distended and knotty, and her health diminishing.

"She began the experiment in the first week of January, 1841. She commenced by eating an apple and an orange the first thing in the morning, and again at night. This was continued for about four days, when she took just before breakfast, in addition to the apple and orange, the juice of a lemon mixed with sugar, and at breakfast two or three roasted apples, taking a very small quantity of her usual food, viz., wheaten bread and butter. During the forenoon she took an orange or two, and an apple. For dinner she took fish or flesh in a small quantity, and potatoes, greens and apples, the apples sometimes peeled and cut into pieces; sometimes boiled whole with the potatoes; sometimes roasted before the fire, and afterward mixed with sugar. In the afternoon she sucked an

orange or ate an apple or some grapes, and always took some lemon juice mixed with sugar or syrup. At first the fruits acted strongly on the stomach and intestines, but this soon ceased, and she could take several lemons without inconvenience. For supper she had again roasted apples or a few oranges, and rice or sago boiled in milk; sometimes the apples, peeled and cored, were boiled along with the rice or sago. On several occasions she took for supper apples and raisins, or figs with an orange cut among them, and sometimes all stewed together. Two or three times a week she took a teaspoonful of a mixture made of the juice of two oranges, one lemon, half a pound of grapes, and a quarter of a pound of sugar. The sugar served mainly to cover the taste of the acids, but all saccharine matter is very nutritious. The object in giving the acids was to dissolve as much as possible the earthy or bony matter which she had taken with her food in the first seven months of her pregnancy. She continued in this course for six weeks, when, to her *surprise and satisfaction, the swollen and prominent state of the veins*, which existed before she began, had *entirely subsided;* her legs and feet, which were also swollen considerably, had returned to their former state; and she became so light and active she could run up and down a flight of more than twenty stairs, with more ease than usual when she was perfectly well. Her health became unwontedly excellent, and scarcely an ache or a pain

affected her up to the night of her delivery. Even her breasts, which, at the time she commenced the experiment, as well as during her former pregnancies, were sore and tender, became entirely free from pain, and remained in the very best condition after her delivery also, and during her nursing."

He continues: "At nine o'clock, after having cleaned her apartments, she was in the adjoining yard shaking her own carpets, which she did with as much ease as any one else could have done. At half-past ten she said she believed her 'time was come,' and the *accoucheur* was sent for. At one o'clock the child was born and the surgeon had left the room. He knew nothing of the experiment being made, but on being asked on paper by the husband two days afterward if he 'could pronounce it as safe and as easy a delivery as he generally met with,' he replied on paper: 'I hereby testify that I attended Mrs. Rowbotham on the 3d inst., and that she had a safe labor and more easy than I generally meet with.' On his asking the midwife if she thought it as easy as usual, she replied: 'Why, I should say that a more easy labor I never witnessed—I never saw such a thing and I have been at a great many labors in my time!'

"The child, a boy, was finely proportioned and exceedingly soft, his *bones resembling gristle.* He became of large size and very graceful, athletic and strong as he grew up. The diet of his mother was immediately changed, and she ate bread and

milk and all articles of food in which phosphate of lime is to be found, and which had been left out before. She also got up from her confinement immediately, and well. After her last delivery, July, 1838, full ten days elapsed before she could leave her bed, and then swooned at the first attempt; on this occasion, March, 1841, she left her bed the fourth day and not only washed, but partly dressed herself. Had she not been influenced by custom and somewhat timid, she might have done so sooner. To be assisted appeared like a burlesque to her, not to say annoyance. She had no assistance from medicine."

In the former pregnancies she had subsisted very much on bread, puddings, pies, and all kinds of pastry, having an idea that solid food of this kind was necessary to support the fœtus. Nutritious food can be had without that hard and bony element which is so large an ingredient of wheaten flour. Sago, tapioca, rice, etc., have little of it.

Beans, rye, oats, barley, *have not so much earthy matter* as wheat; potatoes and peas not more than *half as much;* flesh of fowls and young animals, *one-tenth;* rice, sago, fish, eggs, etc., *still less;* cheese, *one-twentieth;* cabbage, savoy, artichokes, coleworth, asparagus, rhubarb, cauliflower, celery, and fresh vegetables generally, turnips, carrots, onions, radishes, garlic, parsley, spinach, small salad, lettuce, cucumbers, leeks, beet roots, parsnips, and all kinds of herbs and flowers, average less than *one-fifth;* apples, pears, plums, cherries,

strawberries, gooseberries, raspberries, cranberries, blackberries, huckleberries, currants, melons, olives, peaches, apricots, pineapples, nectarines, pomegranates, dates, prunes, raisins, figs, lemons, limes, oranges and grapes, on the average are *two hundred times less ossifying* than bread, or anything else prepared from wheat flour. Such articles as honey, treacle, sugar, butter, oil, vinegar and alcohol, if unadulterated, are quite free from earthy matter.

Mr. Rowbotham's idea originated from reading in the *Penny Cyclopædia*, the following:

"When first the human embryo becomes distinctly visible, it is almost wholly fluid, consisting only of soft gelatine and pulp. In this gelatinous pulp solid substances are formed, which gradually increase, and are fashioned into organs. These organs, in their rudimentary state, are soft and tender, but in the progress of their development constantly acquiring a greater number of solid particles, the cohesion of which progressively increases, the organs at length become dense and firm. As the soft solids augment in bulk and density, the bony particles are deposited, sparingly at first and in detached masses, but accumulated by degrees. These too, are at length fashioned into distinct osseous structures which, extending in every direction until they touch at every point, ultimately form the connected bony framework of the system. The bony fabric, although soft, tender and pliable at first, becomes by degrees firm and resisting." Upon this he reasoned thus:

"If the first visible state of the human being is that of a fluid, or soft, gelatinous pulp, and if the embryo or fœtus gradually consolidates in firmness or density by the accumulation of bony particles, will it not, at any given period of its existence, be more or less firm according to the bony matter which has been deposited! And is not the mother's blood the source of this bony matter, since it builds, supports and nourishes the fœtus? And is not the mother's blood derived from her food and drink? And according to the proportion of bony matter existing in them, will not the fœtus become more or less firm and resisting?

"Moreover, he knew that it made all the difference whether the fœtus were in gristle or not, at birth, with respect to the pain of labor; and that it was better for the future size and beauty of the child, and even its strength, that it should be born with gristle and not with the bones hardened; but that the latter process should be the consequence of its own food taken after birth. Hence, he very philosophically concluded to try the experiment of having his wife feed, during gestation, on substances which did not hold a large proportion of phosphate of lime, which is the hard ingredient of bones; but take those substances during her period of nursing, and feed the child upon them during its growth.

"The experiment succeeded by a partial trial in this morbid case, and in every case where the theory has been thoroughly tested, the results

have been highly satisfactory. One lady who had learned from the pamphlet, said that from the first moment that she thought she was pregnant, she lived without eating any bread, potatoes or milk, but subsisted on sago, tapioca, rice, young meat—when she took meat—fruits of all kinds, and vegetables, and drank tea and lemonade made with distilled water. She said she never had an hour of nausea, or discomfort during her pregnancy; had so easy a labor that she thought it not worth dreading; and her boy, small and soft at birth, became unusually large, hard and strong, in six months. When born, he, like Mrs. Rowbotham's, was covered from head to foot with a downy substance that could only be seen when held against the light, superior to the finest velvet, and of a beautiful feathery appearance.

"Another, who governed herself wholly by the teachings of the pamphlet, never experienced a moment's discomfort before delivery. She took nothing made from our grains, but confined herself to the West Indian ones—rice, sago, tapioca; and taking a disgust to our summer fruits, subsisted largely on oranges, tamarinds, marmalades and also took a great many lemons. At first the fruits made her bowels too loose, but she did not abandon them on that account, but took mutton broth with rice in it to correct this effect. She had so little thirst that she drank nothing but a little tea, made with distilled water. In all cases she rigidly adhered to the fruit diet without a

single day's exception; her labors were short and comparatively painless; and her three children were splendid instances of large, healthy, strong and beautiful physique."

Many cases might be shown here were it necessary, but those already quoted are sufficient to show what correct living, healthful exercise and a fruit diet strictly adhered to, will accomplish, and the reader is earnestly requested to ponder well and follow closely the teachings of these pages.

While the fruit diet alone will accomplish much and go far toward making labor easy to be borne, there are other essentials that should not be neglected. Bathing and exercise are powerful aids; indeed, they are co-partners in acquiring the desired result. The bathing should be thorough and of everyday occurrence, as recommended in previous pages; the body should be thoroughly sponged with tepid water each morning, and a cool, quick sitz-bath be immediately taken, followed by a brisk drying of the parts with a moderately coarse Turkish towel. The vaginal canal must be kept thoroughly cleansed by tepid douche baths, and in the last days of pregnancy, both the sitz-bath and the vaginal douche should be taken *warm*, while in the early stages of labor, or in hard and lingering labors, they should be taken hot.

Daily exercise, thorough and systematic, is equally as important a factor as the diet and the bath. In pleasant weather gentle walks in the open air and sunlight should be taken. Care must be

used that the patient, if delicate, be not fatigued. Thorough training, however, if begun in time will make the delicate woman strong, and the exercise which was before an effort will soon become easy and a pleasure; the strength required be but a tithe of that possessed. Light gardening cannot be too highly recommended, and where possible, is very beneficial. Housework at this time also comes in for a good share of attention, and ought not to be neglected. Care should be taken in this, as in all exercise and work, that there is no straining or heavy lifting, no running up or down stairs, no shocks, fatigue, or over-exertion. This is eminently a period of home making, or *nest building*, and a woman's heart should never be lighter than when attending to the little wants that go to make home happy and a place of contentment and rest.

She should see that the ventilation is perfect, that the whole house is well aired, and especial care should be taken to banish all mustiness, dampness and impurities from the sleeping room. The air should be cool and pure; the sleep sweet and invigorating. The patient should retire early to bed and rest during the day when so inclined. The dress should be loose and the clothing hung from the shoulders. All pressure should be removed and the utmost freedom of action, both of body and limb, be secured.

If the breath is short, exercise in deep breathing should be taken. Full breathing is necessary to

thoroughly oxygenize the blood. "To learn deep breathing be as passive as possible; that is, assume a position in which all the voluntary motor muscles are inactive. Lie flat on the back, perfectly horizontal, without even an elevation of the head. Shut the mouth and draw the air in through the channel provided by nature, the nose. As a result of bad habits most persons will raise the upper ribs; yet this expansion will soon yield to the movement of the lower ribs, and this again will gradually cease by continual practice, as will also every distension of the ribs. All these faulty movements will be superseded by a bulging out of the abdomen, whose outward swelling will be proportional to the amount of air inhaled.

"Look at that quietly sleeping cat upon the rug. Its sole indication of vitality is the bellows-like motion of its body in breathing. You must also have observed, that in *all* domestic animals, at each respiration, an undulating motion extends quite through the whole trunk, and that this motion terminates only at the hindermost limbs. This is natural respiration as it is performed throughout quadruped existence.

"Have you a perfectly healthy lady friend? Lay your hand upon her and you will find that the abdomen rises and falls in exactly the same way at every respiratory act; not only so, but this act is involuntarily performed in a more profound manner every few moments, and that this increased

motion operates *particularly* upon the lowest portion of the trunk.

"Observe in the same way your own person. If you are an invalid you will find this motion diminished, perhaps suppressed. When half performed you only half live."

CHAPTER X.

CHILD–BIRTH.

As the first labor is generally the most tedious and severe, it behooves a newly married woman to prepare for the coming event. Strict observance of the advice contained in these pages will often make a first labor as easy and as expeditious as an after labor.

A day or two before the labor commences the patient usually feels better than she has done for a long time; she is light and comfortable; she is smaller, and the child is lower down; she is more cheerful, breathes more freely, and is more inclined to take exercise and to attend to her household duties; she has often an inclination to tidy her drawers, and to look up and have in readiness her own linen, and the baby's clothes, and the other requisites for the long-expected event; she seems to have a presentiment that labor is approaching, and she has the feeling that now is the right time to get everything in readiness, as in a short time she will be powerless to exert herself.

Although the majority of patients, a day or two before the labor comes on, are more bright and

cheerful, some few are more anxious, fanciful, fidgety and restless.

A few days, sometimes a few hours, before labor commences, the child "settles," that is there is a *subsidence—a dropping of the womb*—lower down into the abdomen. These are the reasons why she feels lighter and more comfortable, and more inclined to take exercise, and why she can breathe more freely.

The only inconvenience of *the settling of the womb* is, that the womb presses more on the bladder, and sometimes causes an irritability of that organ, inducing a frequent desire to urinate.

At this time there is an increased moisture of the vagina, and of the external parts. She has, at length, slight pains followed by a "show," as it is called. The show is generally tinged with a little blood. When this takes place labor has actually commenced. Another *early* symptom of labor is frequent desire to relieve the bladder.

She has now *grinding pains*, coming on at uncertain periods; sometimes once during two hours, at other times every hour or half hour. These lancinating pains ought not to be interfered with; at this stage, therefore, it is useless to send for a doctor, if he is near; yet the nurse should be in the house, to make preparations for the coming event. Although at this early period it is not necessary to send for the physician, nevertheless, it is well to let him know that his services might shortly be required, in order that he might be in the way, or

that he might leave word where he might quickly be found.

These lancinating pains gradually assume more regularity in their character, return at shorter intervals, and become more severe.

About this time, shivering, in the majority of cases, is apt to occur, so as to make the teeth chatter again. Shivering *during labor* is not an unfavorable symptom; it proves, indeed, that the patient is in real earnest, and that she is making progress.

Although the patient shivers and trembles, until, in some instances, the bed shakes under her, it is unaccompanied with real coldness of the skin; she shivers and feels cold, but her skin in reality is not at all cold, but is hot and perspiring—perspiring at every pore!

She ought not, on any account, unless ordered by the physician, to take brandy as a remedy for the shivering. A cup either of *hot* tea or of *hot* gruel will be the best remedy for the shivering; an extra blanket or two should be thrown over the patient and well tucked around her, in order to thoroughly exclude the air from the body. As soon as she is warm and perspiring the extra clothing should be gradually removed, as she ought not to be kept very hot, or it will weaken her, and will thus retard her labor.

Sickness frequently comes on in the beginning of the labor, and may continue during the whole process. She is not only sick, but she actually

vomits, and she can keep little or nothing on her stomach.

There is, in such a case, little or nothing to be done, as the less an irritable stomach is meddled with, the better. The sickness will probably leave as soon as the labor is over.

She had better, during this stage, either walk about or sit down, and not confine herself to bed; indeed, there is no necessity for her, unless she particularly desire it, to remain in her chamber.

If, at the commencement of labor, the "waters" should break, even if there is no pain, the doctor ought immediately to be sent for; as it is necessary that he should know the exact presentation of the child.

After an uncertain length of time, the character of the pains alters. From being lancinating they become grinding, and are now more regular and frequent, and the skin becomes both hot and perspiring. These may be considered the *true* labor pains. The patient ought to bear in mind that "the true labor pains are situated in the back and loins; they come on at regular intervals, rise gradually up to a certain pitch of intensity, and abate as gradually; it is a dull, heavy, deep sort of pain, producing occasionally a low moan from the patient; not sharp or twinging, which would elicit a different expression of suffering from her."

As soon as the pains assume a bearing-down character, the doctor ought to be in attendance; if he is sent for during the *early* stage, when the

pains are of a lancinating character, and when they come on few and far between and at uncertain intervals, he can do no good; for, if he attempts in the *early* stage to force on the labor, he might do irreparable mischief.

Cramps of the legs and thighs are a frequent, although not constant, attendant on child-birth. These cramps come on more especially if the patient is kept for a lengthened period in one position; hence the importance of allowing her, during the first and second stages of labor, to move about the room. Cramps are generally worse during the third or last stage of labor, and then, if they occur at all, they usually accompany each pain. The poor patient, in such a case, has not only to bear the labor-pains but the cramp-pains There is no danger in these cramps; it is rather a sign that the child is making rapid progress, as he is pressing upon the nerves which supply the thighs.

The nurse ought to well rub, with her warm hand, the cramped parts; and, if the labor is not too far advanced, it would be well for the patient to change her position, and to sit on a chair, or to walk about the room; there being, of course, an attendant, one on each side, to support her. If either a pain or a cramp should come on while she is thus moving about, let her instantly take hold of some article of furniture for support.

Child-birth is a natural process, and ought not to be interfered with, or woe betide the unfor-

tunate patient. I firmly believe that a woman would stand a much better chance of getting well over her confinement *without* assistance than if she had been hurried *with* assistance.

In a natural labor very little assistance is needed, and the doctor is only required in the room occasionally, to ascertain that things are going on rightly. Those patients do best, both at the time and afterward, who are the least interfered with. Bear this in mind, and let it be indelibly written on your memory. This advice only holds good in natural confinements.

Meddlesome midwifery cannot be too strongly reprobated. The duty of a doctor is to watch the progress of a child-birth, in order that if there is anything wrong, he may rectify it; but if the labor is going on well, he has no business to interfere.

As a rule, it is neither necessary nor desirable for a doctor to be much in a lying-in room. In a natural labor, it is surprising how very little his presence is required. After he has once ascertained the nature of the case, *which it is absolutely necessary that he should do*, and has found all going on right and straight, it is better, much better, to allow nature time and full scope to take her own course without hurry and without interference, without let and without hindrance. Nature hates hurry, and resents interference.

Women are far more patient than men; it is well they are, for men would never be able patiently to endure, as women do, the bitterest pangs of child-birth.

Bear in mind, then, that in every well-formed woman, and in every ordinary confinement, nature is perfectly competent to bring, *without the assistance of man*, a child into the world, and that it is only an ignorant person who would, in a natural case of labor, interfere to assist nature. Assist nature! Can anything be more absurd? As though God, in His wisdom, in performing one of His greatest wonders and processes, required the assistance of man. It might, with as much truth, be said that in every case of the process of *healthy* digestion it is necessary for a doctor to assist the stomach in the process of digesting the food! No, it is high time that such fallacies were exploded, and that common sense should take the place of such folly. A natural labor ought *never* to be either hurried or interfered with, or frightful consequences might, and in all probability will, ensue. Let every parturient woman bear in mind that the more patient she is, the more kind and the more speedy will be her labor and her recovery.

There are times, and times without number, when a doctor is called upon to do but little or nothing; and there are others—few and far between—when it is imperatively necessary that he should do a great deal.

It ought to be borne in mind, too, that *tedious labors* are oftentimes *natural*, and that they only require time and patience from all concerned to bring them to a successful issue.

The *first* confinement is generally twice the

length of time of an *after* one, and usually the more children a lady has had, the quicker is her labor; but this is by no means always the case, as *some* of the *after* labors may be the *tedious*, while the *early* ones may be the *quick* ones.

It may be said that a *first* labor, as a rule, lasts six hours, while an *after* confinement probably lasts but three. This space of time, of course, does not usually include the *commencement* of labor pains, but the time that a lady may be *actually* said to be in *real* travail. If we are to reckon from the commencement of the labor, we ought to double the above numbers—that is, we should make the average duration of a first labor twelve; of an after one, six hours.

When a lady marries late in life—for instance, after she has passed the age of thirty—her *first* labor is usually much more lingering and tedious, demanding a great stock of patience from the patient, from the doctor, and from the friends; notwithstanding this, both she and her babe generally do remarkably well. Supposing a lady marries late in life, it is only the *first* confinement that is usually hard and lingering; the *after* labors are as easy as though she had married when young.

A natural labor may be divided into three stages. *The first*, the premonitory stage, comprising the "*settling*" *of the womb*, and the *show*. *The second*, the dilating stage, which is known by the pains being of a lancinating nature, and in which the mouth of the womb gradually opens or dilates

until it is sufficiently large to admit the exit of the head of the child, when it becomes *the third*, the completing stage, which is now indicated by the pains being of an expulsive character.

In the first or premonitory stage, which is much the longest of the three stages, it is neither necessary nor desirable that the patient should be confined to her room; on the contrary, it is better for her to be moving about the house, and to be attending to her household duties.

In the second and dilating stages, it will be necessary that she should be confined to her room, but not to her bed. She is better up, and walking about the room.

In the first and second stages she must not, on any account, strain or bear down to the pains, as many ignorant nurses advise, as by robbing her of her strength, it would only retard the delivery. Besides, while the mouth of the womb is dilating, bearing down cannot be of the slightest earthly use—the womb is not in a fit state to expel its contents. If by bearing down she could (but, which fortunately, she cannot) cause the expulsion of the child; it would, at this stage, be attended with frightful consequences—no less than with the rupture of the womb.

In the third or completing stage it is necessary that she should lie in the bed, and that she should, as above advised, bear gently down to the pains. The expulsive pains will indicate when to *bear* down.

Even in the last stage she ought never to bear down unless the pain is actually upon her; it will, if she does, do her great harm. In bearing down the plan is to hold the breath, and strain down as though she were straining to have a stool.

By adopting the above rules much weariness may be avoided; cramp, from not being kept long in one position, may be warded off; the labor, from being amused by change of room and scene, may be expedited; and thus the confinement may be deprived of much of its monotony and misery.

The pains of labor are sometimes heavy and dull, or what an intelligent patient of mine once described as groany pains. They are occasionally sharp and cutting, while they are at other times boring and twisting. These are all expressive terms, as many labor patients will be able emphatically to indorse.

During the latter stages of labor the patient ought always to keep her eyelids closed, or the straining may cause an attack of inflammation of the eyes, or at all events, make them blood-shot.

Let a large room, if practicable, be selected for the labor, and let it be airy and well ventilated, and if in summer, take care that the chimney is not stopped. If the weather is intensely hot there is no objection to the window being a little open.

If the bedstead is one with a fixed footboard a hassock should be placed against it, in order that the patient, during the latter part of the labor—

during the expulsive pains—may be able to plant her feet firmly against it (the hassock), and thus be enabled the better to aid her pains.

If there is besides the bed, a straw mattress and a hair mattress, let the straw mattress be removed, as a high bed is inconvenient, not only to the patient, but to the doctor and to the nurse.

Preparations for labor.—I should strongly urge a patient *not* to put everything off to the last. She must take care to have in readiness a *good* pair of scissors and a skein of thread. And she ought to have in the house a small pot of prepared lard, a flask of salad oil, and a cake of Castile soap, that they may be at hand in case they are wanted. Some doctors, at such times, prefer the prepared lard, while others prefer the salad oil. Let everything necessary, both for herself and the babe, be well aired and ready for *immediate* use, and be placed in such order that all things may be found, without hurry or bustle, at a moment's notice.

Another preparation for child-birth, and a most important one, is attending to the state of the bowels. *If they are at all costive*, the moment there is the slightest *premonitory* symptoms of labor, she ought to take an enema of warm water. She will, by adopting the above plan, derive the greatest comfort and advantage; it will prevent her delicacy from being shocked by having her bowels open, without her being able to prevent them, during the last stage of the labor; and it will, by giving the adjacent parts more room,

much expedite delivery, and lessen her sufferings.

The next thing to be attended to is the way in which she ought to be *dressed for the occasion.* I would recommend her to put on a clean night-gown; which, in order to keep unsoiled, should be smoothly and carefully rolled up about the waist; then she ought to have on a flannel petticoat to meet it, and, over all, a dressing-gown. If it is winter, the dressing-gown had better either be composed of flannel or be lined with that material.

The bed should be covered with a large piece of waterproof cloth, or bed-sheeting, as it is sometimes called; over this folded sheets ought to be placed. If a waterproof cloth cannot be procured, an oilcloth table cover will answer the purpose. Either of the above plans will effectually protect the bed from injury.

The room should be kept, not hot, but comfortably warm; if the temperature is high, the patient will become irritable, feverish and restless, and the labor will be prolonged.

In order to change the air, let the door of the room, every now and then, be left ajar. If the weather is very warm the lower sash of the window may be opened a few inches.

Many attendants are not only unnecessary but injurious. They excite and flurry the patient, they cause noise and confusion, and rob the air of its purity. *One lady friend, besides the doctor and the nurse, is all that is needed.* In making the selection of a friend, care should be taken that she is the

mother of a family, that she is kind-hearted and self-possessed, and of a cheerful turn of mind. *All chatterers, croakers, and putterers ought, at these times, to be carefully excluded from the room. No conversation of a depressing character should for one moment be allowed. Nurses and friends who are in the habit of telling of bad cases that have occurred in their experience, must be avoided as the plague.*

Boisterous conversation during the progress of child-birth ought never to be permitted; it only irritates and excites the patient. Although noisy merriment is bad, yet at such times gentle, cheerful and agreeable chat is beneficial; toward the conclusion of the labor, however, perfect quietude must be enjoined; as during the latter stage, talking, be it ever so little, is usually most distasteful and annoying to the patient. The only words that should then be spoken are a few words of comfort from the doctor, announcing, from time to time, that her labor is progressing favorably, and that her pain and sorrow will soon be converted into ease and joy.

The attendants and all around a parturient woman must be patient, let the patient herself be ever so impatient—she has frequently cause for her impatience; the bitter pangs of labor are oftentimes severe enough to make even an angel impatient. Not a note, then, of impatience must grate upon her ear; but words of gentleness, of encouragement, and of hope, must be the remedies used by those about her and around her to soothe her impatience.

Another preparation for labor is—to soothe her mind by telling her of the *usual* safety of confinements, and by assuring her that, in the generality of instances, it is a natural process, and no disease whatever; and that all she has to do is to keep up her spirits, to adhere strictly to the rules of her doctor, to have a little patience, and that she will do remarkably well.

All needless cause of fear must be kept out of sight. Labor is, as a rule, perfectly safe and natural; and confidence and cheerfulness are two of the grand remedies to bring it to a happy conclusion.

Brandy ought always to be in the house; but let me impress upon the minds of the attendants the importance of withholding it from the patient unless ordered by the doctor. Numbers have fallen victims to its being indiscriminately given. I am of the opinion that the great caution which is now adopted in giving spirits to women in labor is one reason, among others, of the great safety of the confinements of the present day compared with those of former times.

Brandy is, in cases of flooding, of exhaustion, of fainting, or any other emergency, indispensable. But brandy should be considered as a medicine—as a valuable but powerful medicine—and, like all powerful medicines, should be prescribed by a doctor, and by a doctor only; who will indicate the fit time and proper dose on the administration thereof. If this advice is not strictly fol-

lowed, deplorable consequences may ensue. Brandy, according to the way it is used, is either a faithful friend or a bitter enemy!

The best beverage for a patient during labor is either a cup of warm tea, or of gruel, or of arrow-root. It is folly in the extreme, during the progress of labor, to force her to eat; her stomach recoils from it, as at these times there is generally a loathing for food, and if we will, as we always should, take the appetite as our guide, we shall never go far wrong.

Chloroform in hard and in lingering labor.—Mothers and doctors are indebted to Sir James Simpson for the introduction of chloroform, one of the greatest and most valuable discoveries ever conferred on suffering humanity.

The inhalation of chloroform, according to the will of the operator, causes either partial or complete unconsciousness, and, either for a longer or for a shorter time, freedom from pain. In other words, the effects might, with perfect safety, be continued, either for a few minutes, or from time to time, for several hours; indeed, if given in proper cases, and by a judicious doctor, with immense benefit, and with perfect safety.

Chloroform is more applicable and useful in a labor—more especially in a first confinement—when it is lingering, when the throes are very severe, and when, notwithstanding the pain, the labor is making but little progress—then chloroform is a priceless boon. Chloroform too, is, when the

patient is of a nervous temperament, and when she looks forward with dread and apprehension to every pain, very beneficial.

It may be asked—Would you give chloroform in *every case* of labor, be it ever so easy and quick? Certainly not; it is neither advisable nor expedient in an ordinarily easy, quick confinement to administer it. The cases in which it is desirable to give chloroform are *all* lingering, hard and severe labors; in such I would gladly use it. But, before administering it, I would, as a rule, wait for at least six hours from the commencement of the true pains.

It may be asked—Does the inhalation of chloroform retard the patient's recovery? I emphatically declare *that it does not.* Those who have had chloroform have always, in my practice, had as good and as speedy recoveries as those who have not inhaled it.

Another important consideration in the giving of chloroform is, *that a patient has seldom, if ever, while under the effects of it, been known to die.*

One reason why it may be so safe to give chloroform in labor is, that in the practice of midwifery a doctor does not deem it needful to put his patient under the *extreme* influence of it. He administers just enough to ease her pain, but not sufficient to rob her of total consciousness; while in a surgical operation the surgeon may consider it necessary to put his patient under the *full* influence of chloroform; hence the safety in the one,

and the danger in the other case. "It is quite possible to afford immense relief to render the pains quite bearable," as a patient of mine observed, by a dose which does not procure sleep or impair the mental condition of the patient, and which all our experience would show is absolutely free from danger.

There is another advantage in chloroform—the child, when he is born, is usually both lively and strong, and is not at all affected by the mother having had chloroform administered to her. This is a most important consideration. So highly do I think of chloroform, that I never take charge of a case of confinement without a bottle in my pocket. I find this plan very convenient, as I am then in proper cases, always prepared to give chloroform, and there is no precious time wasted in sending for it.

Chloroform ought never to be administered, either to a patient in labor or to any one else, except by a doctor. *This advice admits of no exception.* And chloroform should never be given unless in a lingering or a hard labor. As I have before advised, in a natural and easy labor, Nature ought not to be interfered with, but should be allowed to run its own course. Patience, gentleness, and non-interference are the best and the chief requisites in the majority of cases.

Hints to attendants in case the doctor is unavoidably absent.—It frequently happens that after the *first* confinement the labor is so rapid that the child is

born before the doctor has time to reach the patient. It is consequently highly desirable—nay, imperatively necessary—for the interest and for the well-doing both of the mother and of the babe, that either the nurse or the lady friend, should in such an emergency, know *what to do and what* NOT *to do.*

In the first place, let the attendants be both calm and self-possessed, and let there be no noise, no scuffling, no excitement, no whispering, and no talking, and let the patient be made to thoroughly understand that there is not the slightest danger, as the principal danger will be in causing *unnecessary* fears, both as to herself and her child: —"A woman, naturally born to fears, is, at these times, especially timid." Tens of thousands are annually delivered without the *slightest* assistance from a physician—and yet both mother and babe almost invariably do well. Let her be informed of this fact, and it will be a comfort to her, and will assuage her fears. The physician, as soon as he arrives, will soon make all right and straight.

In the meantime let the following directions be followed:—*Supposing a child be born before the doctor arrives*, the nurse ought to ascertain whether a coil of navel string is around the neck of the infant; if so, it must be instantly liberated, or he might be strangled. Care should be taken that he has sufficient room to breathe; that there is not a membrane over his mouth; and that his face is not buried in the clothes. Any mucus about the

mouth of the babe ought to be wiped away with a soft napkin, or it might impede the breathing.

If the babe should be *born apparently dead*, a few smart blows must be given on the thighs and on the back ; a smelling bottle ought to be applied to the nostrils ; or a bit of cloth should be singed under the nose, taking care that the burning tinder does not touch the skin ; and cold water must be freely sprinkled on the face. But after all, a good smacking on the thighs, in an apparently still-born babe, is the most *handy*, quick, and ready remedy. Thousands of apparently still-born children have, by this simple remedy, been saved from threatened death. If you can once make an apparently still-born babe cry—*and cry he must*—he is, as a rule, safe. The navel string, as long as there is pulsation in it, ought not to be tied.

The limbs, the back, and the chest of the child ought, with the warm hand, to be well rubbed. The face should not be smothered up in the clothes. If pulsation has ceased in the navel string (the above rules having been strictly followed, and having failed), let the navel string be tied and divided, and then let the child be plunged into warm water—98° Fahr. If the *sudden* plunge does not rouse respiration into action, let him be taken out of the warm bath, as keeping him for any length of time in the water will be of no avail.

If these simple means should not *quickly* succeed, although they generally will, Dr. Marshall Hall's *Ready Method* ought to be tried :—"Place

the infant on his face; turn the body gently but completely *on the side and a little beyond*, and then on the face alternately; repeating these measures deliberately, efficiently, and perseveringly, fifteen times in the minute only."

Another plan of restoring suspended animation is by artificial respiration, which should be employed in the following manner:—Let the nurse close with her left hand, the child's nose, to prevent any passage of air through the nostrils; then let her apply her mouth to the child's mouth, and breathe into it, in order to inflate the lungs; as soon as they are inflated, the air ought, with the right hand, to be pressed out again, so as to imitate natural breathing. Again and again, for several minutes, and for about fifteen times a minute, should the above process be repeated; and the operator will frequently be rewarded by hearing a convulsive sob, which will be the harbinger of renewed life.

Until animation is restored, the navel string ought not to be tied, so long as it pulsates. If tied before the child breathes, he will have but a *slight* chance of recovery. While the navel string is left entire, provided it still pulsates, he has the advantage of the mother's circulation and support.

Should the child have been born for some time before the doctor has arrived, it may be necessary to tie and divide the navel string. A ligature, composed of four or five threads, nearly a foot in length, and with a knot at each end, ought to be

tightly tied around the navel string, about two inches from the body of the child. A second ligature must, in a similar manner, be applied about three inches from the first, and the navel string should be carefully divided midway between the two ligatures. If the doctor is shortly expected, any interference would not be advisable, as such matters ought always to be left entirely to him.

The after-birth must never be brought away by the nurse. If the doctor has not yet arrived, it should be allowed to come away (if left alone it usually will) of its own accord. The only treatment that the nurse ought to adopt is, to apply *firm* pressure with the hands over the region of the womb. This will have the effect of encouraging the contraction of the womb, of throwing off the after-birth, and of preventing violent flooding.

If the after-birth does not soon come away, say in an hour, or *if there is flooding*, another doctor ought to be sent for; but on no account should the nurse be allowed to interfere with it further than by applying firm pressure over the region of the womb, and *not touching the navel string at all.* I have known dangerous, and in some cases, even fatal, consequences to ensue from such meddling.

Rest after delivery.—The patient, for at least an hour after the delivery, ought not to be disturbed, or violent flooding may be produced. The soiled napkins may be removed and clean ones put in their place. Her head ought to be made easy; she

must still lie on her side; indeed, for the first hour, let her remain nearly in the same position as that in which she was confined, with this only difference, that if her feet have been pressing against the bed-post, they should be removed from that position.

A patient, *after* delivery, usually feels shivering and starved; it will therefore be necessary to throw additional clothing, such as a blanket or two, over her, which ought to envelope the body, and should be well tucked around her; but the nurse ought to be careful not to overload her with clothes, or it might produce flooding, fainting, etc. As soon as she is warm, let the *extra* clothing be gradually removed. If the feet are cold let them be wrapped in warm flannel, over which a pillow should be placed.

A frequent change of linen after child-birth is desirable. Nothing is more conducive to health than cleanliness. Great care should be taken to have the sheets and linen well aired.

A foolish nurse fancies that clean linen will give her patient cold, and that dirty linen will prevent it, and keep her warm. Such folly is most dangerous! A parturient woman should bear in mind that dirt breeds fever, and fosters infectious diseases. There would, if cleanliness (of course I include *pure* water in this category) and ventilation were more observed than they are, be very little fever, or infectious diseases of any kind in the world.

A cup of cool, black tea, directly after the patient is confined, ought to be given. I say cool, not cold, as cold tea might chill her. Hot tea would be improper, as it might induce flooding. As soon as she is settled in bed, there is nothing better than a *small* basin of warm gruel.

Brandy ought never to be given after a confinement; indeed, stimulants of all kinds must be carefully avoided, as they produce fever, and inflammation.

Bandage after labor.—This consists of thick linen, similar to sheeting, about a yard and a half long, and sufficiently broad to comfortably support the abdomen. Two or three folded diapers—folded in a triangular shape—should be first applied over the region of the womb, and then the bandage should be neatly and smoothly applied around the lower portion of the abdomen to keep the diapers firmly fixed in their position. The bandage ought to be put on moderately tight, and should be retightened every night and morning, or oftener, if it becomes slack. An Obstetric Binder is admirably adapted to give support after a confinement, and may be obtained of any surgical instrument maker. If there is neither a proper bandage or binder at hand—a yard and a half of *unbleached* calico, folded double, will answer the purpose. The best pins to fasten the bandage are the patent safety pins.

A support after labor is important; in the first place, it is a great comfort; in the second, it

induces the abdomen to return to its original size; and lastly, it prevents flooding. Those women, more especially if they have had large families, who have neglected proper bandaging after their confinements, frequently suffer from enlarged and pendulous abdomens, which give them an unwieldy and ungainly appearance; indeed, completely ruining their figures.

The patient ought *not*, immediately after a labor, under any pretext or pretense whatever, to be allowed to raise herself in bed. If dressed as recommended in a previous paragraph, her soiled linen may readily be removed; and she may be drawn up by two assistants to the proper place, *as she herself must not be allowed to use the slightest exertion.* Inattention to the above recommendation has sometimes caused violent flooding, fainting, falling of the womb, etc., and in some cases, even fatal consequences.

A nurse is too apt, after the confinement is over, to keep a large fire. Nothing is more injurious. A little fire, providing the weather is cold, to dress the baby by, and to encourage a circulation of the air, is desirable. The door, in order to change the air of the apartment, must occasionally be left ajar. The patient requires *pure* air as much as or more than any other person; but how frequently does a silly nurse fancy that it is dangerous for her to breathe it!

After the labor is over, the blinds ought to be put down, and the window curtains should be

drawn in order to induce the patient to sleep, and thus to rest herself after her hard work. Perfect stillness must reign both in the room and in the house. This advice is most important.

It is really surprising, in this present enlightened age, how much ignorance there still is among the attendants of a lying-in room; they fancy labor to be a disease, instead of being what it really is—*a natural process*, and that old-fashioned notions, and not common sense, ought to guide them.

The patient should, after the birth of her child, be strictly prohibited from talking, and noisy conversation ought not to be allowed; indeed, she cannot be kept too quiet, as she may then be induced to fall into a sweet sleep, which would recruit her wasted strength. As soon as the babe has been washed and dressed, and the mother made comfortable in bed, the nurse ought alone to remain; let every one else be banished from the room. Visitors should on no account be allowed to see the patient. Perfect rest is most essential to recovery, and is the best of medicines.

Before going to sleep, if there is the slightest inclination to urinate, it should be promptly responded to by the patient. This will make her more comfortable, and the sleep more sweet. Let me urge the importance of performing this function while in a lying position. I have known violent flooding to result from allowing the patient to sit up while obeying the demands of nature.

The bed pan (previously warmed by dipping it

in very hot water and then quickly drying it) ought to be used for some days after confinement. It is admirably adapted for the purpose, as it takes up but little room, and is conveniently shaped, and readily slips under the patient, and enables her to make water comfortably, she being perfectly passive the while. It should be passed under her in the front, and not at the side of the body.

The bowels.— After a confinement the bowels are usually costive. This confined state of the bowels after labor, is doubtless a wise provision of nature, in order to give repose to the surrounding parts—especially to the womb; it is well, therefore, *not* to interfere with them, but to let them have for three days perfect rest. Sometimes, before the expiration of the third day, the bowels are relieved by taking a cup of warm coffee. If such is the case, all well and good; as it is much better that the bowels should be relieved *without* medicine than *with* medicine; but if, having taken the coffee, at the end of the third day they are not opened, then early on the following day let the nurse administer an enema of warm water—a pint each time. This is an excellent, indeed the best, method of opening the bowels, as it neither interferes with the appetite nor with the digestion; it does away with the nauseousness of castor oil, and does not, in the administration, give the slightest pain. If the first enema should not have the desired effect, let one be given every quarter of an hour until relief is obtained. One of the best for the pur-

pose—if the warm water is not sufficiently active is the following:—

Take of—Olive oil, two tablespoonfuls;
Table salt, two tablespoonfuls;
Warm oatmeal gruel, one pint;

To make a clyster.

Another capital enema for the purpose is one made of Castile soap dissolved in warm water. But if the water is sufficient for the purpose, so much the better—it is far preferable to either of the others. Remedies, providing they are effectual, cannot be too simple; and all that is usually required in such cases is, to wash the bowels out, which, as a rule, the warm water is of itself quite able to do. It is therefore desirable, before any other more complicated enema be used, simply to try the warm water only.

If the patient object to the administration of an enema, then either a teaspoonful of calcined magnesia, mixed in a little water, or the following draught, will be found useful; either will act kindly, and will neither gripe the mother nor the child:

Concentrated Essence of Senna, half an ounce;
Syrup of Ginger, one dram;
Pure Water, seven drams;

To make a draught. To be taken early in the morning.

If in twelve hours the above draught should not have the desired effect, let the draught be repeated. If the bowels are easily moved, *half* of the above draught is usually sufficient. Or, one or two teaspoonsful of an electuary of figs, raisins

and senna may be eaten early in the morning*—but let every parturient woman bear in mind that as soon as her bowels will act, either naturally or by the taking of a cupful of warm coffee, or by the administration of a warm water enema, not a particle of medicine should be swallowed. Much laxative medicine is an abomination.

An enema is, both during nursing and during pregnancy, an admirable method of opening costive bowels, and deserves to be more universally followed than it now is; fortunately, the plan is making rapid progress, and shortly will entirely supersede the necessity of administering cathartic drugs. Aperients are a clumsy and roundabout way of opening costive bowels, and sometimes harass the patient exceedingly. The lower bowel, and not the stomach, needs emptying; the stomach should be left alone, and not be worried by cathartics. The stomach has its proper work to do, namely, to digest the food put into it, and which function aperients sadly interfere with. Hence the great value of an enema, and of keeping the bowels regular, when possible, by fruit and not by physic, by gentleness and not by violence.

The cleansings.—This watery discharge occurs directly after a confinement, and lasts a week or ten days, and sometimes even longer. It is of a reddish color, which gradually changes to a brownish hue, and afterward to a greenish shade; hence the name of "green waters." It has in some

*See p. 113.

cases a disagreeable odor. A moderate discharge is necessary; but when it is profuse it weakens the patient.

Some ignorant nurses object to having the parts bathed after delivery; they have the impression that such a proceeding would give cold. Warm fomentations twice a day, and even oftener, either if the discharge or if the state of the parts require it, are absolutely indispensable to health, cleanliness, and comfort. Cleanliness at these times is far more necessary than at any other period of a woman's existence. Neglecting to bathe the parts at these times is shameful, and leads to miserable consequences.

There is nothing better for the purpose than a soft sponge and warm water, unless the parts are very sore; when this is the case, a warm fomentation, two or three times a day, of marshmallows and camomile,* will afford great relief; or the parts may be bathed with warm, well-made and well-boiled oatmeal gruel, of course without salt. The parts ought, after each fomentation, to be well, but quickly, dried with warm, dry, soft towels, and after the bathing and the drying, should, by means of a piece of soft linen be well anointed with warm salad oil. Warm salad oil for this purpose is a most soothing, healing, and comfortfng dressing, and is far superior to *all* animal oils.

*Boil two handfuls of marshmallows and two handfuls of camomile blows in two quarts of water for a quarter of an hour, and strain.

The *internal* parts should be well syringed out with either of the above remedies two or three times a day.

Let the above rules be strictly followed. Let no prejudices stand in the way of the above advice. Bathing of the parts after confinement, and that frequently, is absolutely required, or evil results will ensue.

Notwithstanding the great good that results from exercise and the "fruit diet," in confinement, I would urge my reader, despite her inclination to be up and about, to remain quiet in bed for a few days after labor.

The womb requires rest, and the only way to obtain it is by remaining in bed for the first five or six days. After this the patient may safely be *removed* for a short period of the day either to another bed or to a sofa. She should be transferred by two assistants, one taking hold of her shoulders and the other of her hips, and thus lifting her from one bed to the other.

The above plan may appear irksome, but my experience tells me that it is necessary, absolutely necessary. The benefit the patient will ultimately reap from it will amply repay the temporary annoyance of so much rest.

Poor women who go about too soon after their confinements frequently suffer from falling of the womb. An abundance of exercise during pregnancy, and perfect rest for a few days after labor, cannot be too strongly insisted upon.

Falling of the womb is a disagreeable complaint, and the misfortune of it is, that every additional child increases the infirmity. In the majority of cases this trouble might have been prevented, if the recumbent posture had been strictly adopted, for ten days, or two weeks after delivery.

Dietary.—For the first day the diet should consist of nicely made and well boiled Graham gruel, arrowroot, and milk, bread and milk, tea, dry toast and butter, or bread and butter; taking care not to overload the stomach with too much fluid. A cupful of either food should not be exceeded, otherwise the patient will feel oppressed, she will be liable to violent perspiration, and there will be a too abundant secretion of milk.

For the second day.—Breakfast,—either dry toast and butter, or bread and butter, and black tea. *Dinner*,—either chicken or game, mashed potatoes and bread. *Supper*,—a breakfast-cupful of well-boiled and well-made gruel, made either with water or with fresh milk, or with equal parts of milk and water, or with water with a table-spoonful of cream added to it.

On the third and fourth days.—Similar diet to the *second day*, with this difference, that for dinner the patient should have mutton—either a mutton chop or a cut out of a joint of mutton, instead of the chicken or game. The diet ought gradually to be improved, so that at the end of four days she should return to her usual diet—providing it is plain, wholesome and nourishing.

The above, *for the generality of cases*, is the scale of dietary; but of course every patient ought not to be treated alike. If weak and delicate, she may require good nourishment from the beginning, and instead of gruel, it may, from the *very commencement*, be necessary to prescribe good strong beef tea, veal and milk broth, chicken broth, mutton chops, grilled chicken, game, the yolk and the white of an egg beaten up together in half a teacupful of good fresh milk, etc.

For the first week either toast and water or barley water and milk, with the chill taken off, is the best beverage. Barley water, either with or without the milk, forms an admirable drink; but in either case, it ought always to be eaten flavored with table salt. A little salt should always be added to barley water—it takes off its insipidity, it gives it a relish which it otherwise would not possess. Some of my patients like it not only flavored with salt, but also slightly sweetened with loaf sugar.

Wine, spirits, and beer, during this time, unless the patient is weak and exhausted, or unless ordered by the doctor, ought not to be given. All liquids given during this period should be administered by means of a feeding-cup; this plan I strongly recommend, as it is both a comfort and a benefit to the patient; it prevents her every time she has to take fluids from sitting up in bed, and it keeps her perfectly still and quiet, which, for the first week after confinement, is very desirable.

When she is weak, and faint, and low, it may, as early as the first or second day, be necessary to give a stimulant, such as either a tumblerful of home-brewed ale or a glass or two of wine daily; but in the generality of cases either toast and water, or barley water and milk, for the first week after confinement, is the best beverage.

An excellent beverage to quench the thirst in hot weather, after a confinement, is cold, weak black tea, with very little sugar, but with plenty of cream in it.

Tea for breakfast and supper is, during a recovery, better than coffee; but if tea is distasteful, then either cocoa or chocolate, made with one-half fresh milk, should be taken. Cocoa and chocolate are both invigorating and nourishing, and are very suitable as beverages, both at and after a confinement.

If the bowels are costive, coffee is, from time to time, preferable to either tea, cocoa or chocolate; but not otherwise. Coffee, if used regularly, requires the taking of exercise, which, in this case, is quite out of the question. An occasional cup of coffee is often of great service, as it will do away with the necessity of swallowing a cathartic—which is an important consideration. The best time for taking the cup of coffee is early in the morning. Coffee, after a confinement, ought to be taken, not as a beverage regularly, but as an aperient occasionally.

Milk will often be made to agree with a nursing

mother if she will *always* take it mixed with an equal quantity of water. The water added to the milk, prevents the milk from binding up the bowels, which it otherwise would do; not only so, but milk without the addition of an equal quantity of water is usually too heavy for the stomach easily to digest.

I have for years paid great attention to the subject, and come to the conclusion that *water is a most valuable aperient.* While milk, by itself, binds up the bowels, producing obstinate constipation; the mixing of an equal quantity of water with the milk entirely deprives milk of its binding qualities, and keeps the bowels in a regular state. These facts are most important to bear in mind; and I know them to be facts, having had great experience in the matter, and having made the subject my especial study, and having had the honor of first promulgating the doctrine that water, in proper quantities, is a valuable aperient, and that water, in due proportions, mixed with milk, prevents the milk from confining the bowels, which it otherwise would do.

Some persons have an idea that a wife, for some months after child-birth, should be treated as an invalid—should lead an idle life. This is an error; for of all people in the world, a nursing mother should remember that "employment is Nature's physician, and is essential to human happiness." The best nurses and the healthiest mothers, are wives who are employed from morn-

ing until night—who have no spare time unemployed to feel nervous, or to make complaints of aches and of pains—to make a fuss about; indeed, so well does employment usually make them feel that they have really no aches or pains—either real or imaginary—to complain of, but are hearty and strong, happy and contented; indeed, the days are too short for them.

CHAPTER XI.

NURSING.

A mother ought not, unless she intends to devote herself to her baby, to undertake to nurse him. She must make up her mind to forego the so-called pleasures of a fashionable life. There ought to be no half-and-half measures; she should either give up her helpless babe to the tender mercies of a wet nurse, or she must devote her whole time and energy to his welfare—to the greatest treasure that God hath given her.

If a mother is blessed with health and strength, and has a good breast of milk, *it is most unnatural and very cruel for her not to nurse her child.*

A mother who does not nurse her child is very likely soon to be in the family way again. This is an important consideration, as frequent child-bearing is much more weakening to the constitution than is the nursing of children. Indeed nursing, as a rule, instead of weakening, strengthens the mother's frame exceedingly, and assists her muscular development. Those mothers who nurse and cherish their own offspring are not only more truly *mothers*, but they have a double reward in that, while their children thrive and thus gladden

their hearts, they themselves are also very materially benefited. No woman is so healthy as she who bears healthy children healthily.

The breast.—As soon as the patient has recovered from the fatigue of labor—say, in about four to six hours—attention ought, especially in a *first* confinement, to be paid to the breasts.

In the *first* confinement there is, until the third day, but very little milk; although there is usually on that day, and for two or three days afterward, a great deal of swelling, hardness, distension, and uneasiness of the breasts; in consequence of which, both care and attention are needed.

Not only this, but there is frequently a degree of feverishness, which, in some cases, is rather severe, amounting even to what is called *milk fever.*

If there is milk in the breast, which may be readily ascertained by squeezing the nipple between the finger and the thumb, the infant should at *first* be applied, not *frequently,* but at considerable intervals, say until the milk is properly secreted, every four hours. When the milk flows, the child ought to be applied more frequently, but still at stated times.

The child ought never to be given the nipple until it is first satisfactorily ascertained that there is really milk in the breasts; neglect of this advice has caused many a gathered breast, and has frequently necessitated the weaning of the child.

To wash away any viscid mucus from the nip-

ple, or any stale perspiration, the breasts and nipples should be sponged with a little warm water, and dried with a warm, soft napkin. Some infants are so particular, that, unless the breasts are perfectly free from stale perspiration, and the nipples from dried-up milk, they will not nurse. If after the above cleansing process, there is any difficulty in making him nurse, smear a little cream on the nipple, and then immediately apply him to it.

If the breasts are full, hard, knotty, and painful, which they generally are two or three days after a *first* confinement, let them be well but tenderly rubbed every four hours, with the best olive oil (a little of which should be warmed in a teacup) or with equal parts of olive oil and of *Eau de Cologne*, which should be well shaken in a bottle every time before using.

On the third day, more especially after a *first* confinement, the breasts are apt to become very much swollen, painful and distended. If such is the case, it may be necessary, for a few days, to have them drawn once or twice daily.

If the breasts are more than usually large and painful, in addition to assiduously using the one or the other of the above liniments, apply to the breasts, in the intervals, young cabbage leaves, which should be renewed after each rubbing. Before applying them, the veins of the leaves should with a sharp knife be cut smooth—level with the leaf. It will require several, as the whole of the

breast ought to be covered. The cabbage leaves will be found both cooling and comforting. Each breast should then be nicely supported with a soft folded silk handkerchief which should be tied at the back of the neck—thus acting as a kind of sling to the breasts.

While the breasts are full and uncomfortable the patient ought not to drink *much* fluid, as it would only encourage a larger secretion of milk.

When the secretion of milk is at its height, she ought, for a couple of mornings, to take a little cooling medicine—a Seidlitz powder—and every four hours the following effervescing mixture:

Take of—Bicarbonate of Potash, one dram and a half;
Distilled Water, eight ounces;

To make a mixture.—Two tablespoonfuls to be taken, with two tablespoonfuls of the Acid Mixture, every four hours, while effervescing,

Take of—Citric Acid, three drams;
Distilled Water, eight ounces;

Mix.—The Acid Mixture.

The best way of taking the above is to put two tablespoonfuls of the first mixture into a tumbler, and two tablespoonfuls of the acid mixture into a wine glass, then to add the latter to the former, and it will bubble up like soda water. *Instantly* drink it while effervescing.

The size of the breasts under the above management will soon decrease, all pain will cease, and the infant will, with ease and comfort, take the breast.

Second and succeeding confinements.—If the breasts

are comfortable (which in the second and in succeeding confinements they probably will be), let nothing be done to them, except as soon as the milk comes, at regular intervals, apply the child alternately to each of them. Many a breast has been made uncomfortable, irritable, swollen, and even has sometimes gathered, by the nurse's interference and meddling. Meddlesome midwifery is bad, and I am quite sure that meddlesome breast-tending is equally so. A nurse, in her wisdom, fancies by rubbing, by pressing, by squeezing, by fingering, by liniment, and by drawing, that she does great good, while in reality, in the majority of cases, by such interference she does great harm.

The child will, in *second* and in *succeeding* confinements, as a rule, be the best and the only doctor the bosoms require. I am quite convinced that, in a general way, *nurses interfere too much*, and that the breasts in consequence suffer. It is the doctor's province, in such matters, to direct the treatment; while it is the nurse's duty to fully carry out the doctor's instructions.

Let the above advice be borne in mind, and much trouble, misery, and annoyance may be averted. Nature manages these things much better than any nurse possibly can do; and does not, as a rule, require helping.

Milk fever or weed.—The patient is liable a few days—generally on the third day after confinement—to a feverish attack, called Milk Fever or Weed, or Ephemeral Fever, and ephemeral it truly is, as

it lasts only twenty-four hours, or at most, unless some mischief should intervene, forty-eight hours. It comes like an ague fit, having its three stages—its cold stage, its hot stage, and its sweating stage. There is usually accompanying it headache, and pains flying about one or both the breasts, the back, and the lower part of the abdomen.

The fever on the secretion of the milk, usually passes off, leaving no damage in its track; yet, notwithstanding, it sometines does leave injury behind, either in the womb or in the breast—causing, in some instances, a badly gathered breast.

The ephemeral fever, therefore, requires great care and attention, both from the doctor and from the nurse to ward off such a *serious* disease as a gathered breast.

Stated time for nursing.—After the babe is washed, he generally falls asleep, and sleeps for several hours. It is not necessary to arouse him from his slumber to give hin sustenance—certainly not; the mother's milk is not always ready for him; but as soon as it is, he instinctively awakes, and becomes importunate, and cries until able to obtain it. Nature—beneficent Nature—if we will but listen to her voice, will usually tell us *what to do* and *what not to do.* The teasing of a mother's breasts by putting the babe to them before there is milk, and the stuffing of an infant with artificial food, are evils of great magnitude, and cannot be too strongly condemned.

A mother ought to nurse her babe at stated

times. It is a bad habit to give him the breast every times he cries, regardless of the cause; for be it what it may—over-feeding, griping, wind, or acidity—she is apt to consider the breast a panacea for all his sufferings. A mother generally nurses her infant too often—having him almost constantly at the breast. This practice is injurious both to parent and to child. For the first month, the child should be nursed about every hour and a half; for the second month, every two hours; gradually increasing as he becomes older, the distance of time between, until at length he has the breast about every four hours. If nursed at stated periods, he would only look for it at those times, and be satisfied.

A mother frequently allows her babe to nurse a great part of every night. This plan is hurtful both to herself and the child; it weakens her, and thus enfeebles him; it robs them both of their sleep, and generates bad habits, which it will be difficult to break; it often gives the mother a sore nipple and the child a sore mouth; it sometimes causes the mother to have a gathered breast, and fills the child with wind.

It is surprising how soon an infant may, by judicious management, be brought into good habits; it only requires, at first, a little determination and perseverance; a nursing mother therefore ought at once to commence by giving her child the breast at stated periods, and should rigidly adhere to the times above recommended.

A mother should not, *directly* after taking a long walk, and while in a state of *violent* perspiration, give her babe the breast; the milk, being at that time in a heated state, will disorder her child's bowels, or it may originate some skin disease, and one difficult to cure. She ought before giving him the breast, to wait until the surface of her body be *moderately* cool, but not cold. Let her be careful not to sit in draughts.

Clothing.—A nursing mother ought to have her dress made loose and comfortable. If not in the habit of wearing a flannel waistcoat, she ought at least to have the breast covered with flannel, taking care that there is a piece of soft linen over the nipples. I should advise a nursing mother to provide herself with a waterproof nursing apron, which may be procured at any druggist's.

Dietary.—A nursing mother ought to live plainly; her diet should be both light and nourishing. It is a mistaken notion that at these times she requires *extra* good living. She ought never to be forced to eat more than her appetite demands, or indigestion, heartburn, sickness, costiveness, or a bowel complaint, will ensue. It is folly at any time to force the appetite. If not hungry, compelling her to eat will do her more harm than good.

The best meats are mutton and beef; veal and pork may be eaten for a change. *Salted* meats are hard of digestion; if boiled beef is eaten, it ought to be only *slightly* salted. Salt of course,

must be eaten with *unsalted* meat. Highly-seasoned dishes are injurious; they inflame the blood, and thus disorder the milk.

Some persons consider that no care is required in the selection of food, and that a nursing mother may eat anything, be it ever so gross and unwholesome; but if we appeal to reason and facts, we shall be borne out in saying that great care is required. It is well known that cow's milk partakes of the properties of the food on which the animal lives. Thus, if a cow is fed on swedes, the milk and the butter will have a turnipy flavor. This, beyond a doubt, decides that the milk does partake of the qualities of the food on which she feeds. The same reasoning holds good in the human species, and proves the absurdity of allowing a nursing mother to eat anything, be it ever so gross, indigestible, or unwholesome. Again, either a dose of purgative medicine or greens eaten at dinner, will sometimes purge the babe as violently, or even more so, than the mother herself.

A babe who is nursed by a mother who lives grossly is more prone to disease, particularly to skin diseases, and to inflammatory complaints, and to diseases which are difficult to subdue. On the other hand, a nursing mother, who lives on nourishing diet, yet simply and plainly, has usually the purest, as well as the most abundant, supply of milk.

Do not let me be misunderstood: I am not ad-

vocating that a mother should be fussily particular. Let her take a variety of food, both animal and vegetable. But what I object to are gross meats, such as goose and duck; highly salted beef; shell-fish, such as lobster and crab; rich dishes; *highly seasoned* soup; pastry, unless plain; cabbage, greens and pickles, if found to disagree with the babe, and with any other article of food which is either rich, gross, or indigestible, and which, from experience, she has found to disagree with herself or with her child. It will be seen from the above catalogue, that my restrictions as to diet are limited, and I hope are founded both on reason and on common sense—which ought to be the guides and counselors of every nursing mother, and of every one else besides.

A mother who is nursing is at times liable to attacks of depression. Let me strongly urge the importance of her abstaining from wine and from all other stimulants as a remedy; they would only raise her spirits for a time and then would depress them in an increased ratio. Either a drive in the country, a short walk, a cup of tea, or a chat with a friend, would be the best medicine.

Fresh air and exercise.—Outdoor exercise during nursing cannot be too strongly insisted upon; it is the finest medicine both for babe and mother. Whenever the weather will admit, it must be taken. It is utterly impossible for a nursing mother to make good milk unless she takes an abundance of exercise, and breathes plenty of fresh air.

Whatever improves the health of the mother, at the same time benefits the child. There is nothing more conducive to health than an abundance of outdoor exercise. It often happens that a mother who is nursing seldom leaves the house; she is a regular fixture, or like a cabbage that vegetates in one spot; the consequence is both she and her babe are usually delicate and prone to sickness—it would, indeed, be strange if they were not.

Carriage riding, if the weather is hot and sultry, is preferable to walking; if that is not practicable, she ought to have the windows thrown wide open, and should walk about the hall, and the rooms, as she would by such means avoid the intense heat of the sun. Although carriage exercise during intensely hot weather is preferable to walking exercise, yet walking must, during some portion of the day, be practiced. There is no substitute, as far as health is concerned, for walking. Many ailments that women now labor under could be walked away; and really it would be a pleasant medicine—far more agreeable and effectual than either pill or potion!

Occupation.—I strongly recommend a nursing mother to attend to her household duties. She is never so happy, nor so well, as when her mind is moderately occupied with something useful. She never looks so charming as when attending to the little cares of her home.

A patient must have occupation—bustling oc-

cupation--real downright work, either in the form of outdoor exercise, or of attending to her household duties, if she desires to have a good breast of milk, and healthy children. The Almighty is no respecter of persons. He has ordained that work shall be the lot of man, and of woman too! It is a blessed thing to be obliged to work. If we do not work, we have to pay a heavy penalty in the loss of both health and happiness. Work is the grand cure of all the maladies and miseries that ever beset mankind.

A mother who is listless and idling the greater part of every day in an easy chair, or reclining on a sofa, in a room where a breath of air is not allowed to enter, usually makes a miserable and wretched nurse. She is hysterical, nervous, dyspeptic, emaciated and dispirited; having but little milk, and that little of a bad quality; her babe is puny, pallid and unhealthy, and frequently drops into an untimely grave. Occupation, with fresh air and exercise, is indispensable to a mother who is nursing. How true it is that to be employed is to be happy, while the converse is equally correct—to be idle is to be miserable.

No wife—more especially a nursing mother—can be strong and well unless she has occupation. Occupation is emphatically a necessity. "Nature has made occupation a necessity; society makes it a duty; habit may make it a pleasure."

Ailments, etc.—A *good* nipple is important, both to the comfort of the mother and to the well-doing of the child.

One, among many, of the ill effects of corsets is the *pushing in of the nipples*; sore nipples, and consequent suffering, are the result; a mother thus afflicted may be quite unable to nurse her infant; and then she will be severely punished for her ignorance and folly. Women who never wear stays have much better nipples, and more fully developed breasts; hence such mothers are more likely to make better nurses to their babes. There is no doubt that the pressure of the stays tends to decrease the size of the breasts and cause the nipples to be pushed in, and thus to sadly interfere with their functions. I should strongly advise every mother who has daughters old enough to profit by it, to bear this fact in mind, and thus to prevent mischief when mischief might be prevented, by not allowing them to wear stays.

Treatment of very small and retracted nipples.— The baby ought to nurse by means of a glass nipple shield, placed over the nipple. I have known many mothers able to nurse their children with this invention, who otherwise would have been obliged to have weaned them, or to have procured the assistance of a wet nurse. The above aid, in the generality of instances, will enable the infant to nurse with ease. After this has been used for a time, the nipples will be so improved as to render the continuance of it unnecessary. I do not advise the use of this nipple shield until a fair trial has been given by applying the babe at *once* to the nipple; but if he cannot draw out the

nipple, then, rather than wean him, or than employ a wet nurse, it ought, by all means, to be tried.

The following is an excellent remedy for retracted nipples: Apply a zone of collodion, an inch or two wide around the nipple—at the distance of half an inch. This has been found a very efficient remedy. The application may be made with a camel's hair brush, or with the finger. Collodion is harmless in its effect, and can be applied often, till desired result is attained.

As soon as the nipple is sufficiently drawn out, the nipple shield should be dispensed with. When the infant is not at the breast a metallic shield should be worn. Small, bad and sore nipples have, by wearing these shields, frequently been drawn out and made good ones; the dress will suffice to keep them in their places. These shields are very cooling and healing, and serve to keep off all pressure from the clothes; they will frequently cure sore nipples when other remedies have failed.

Sore nipples.—If a woman during the latter months of pregnancy, were to adopt means to harden the nipples, sore nipples during nursing would not be so prevalent as they now are.

Sore nipples are frequently produced by the injudicious custom of allowing the child to have the nipple almost constantly in his mouth. Stated periods for nursing, as recommended in a previous paragraph, should be strictly adopted. Another frequent cause of a sore nipple is a result of the babe having the thrush. It is folly to attempt to

cure the nipple, without at the same time, curing the mouth of the infant.

Treatment.—One of the best remedies for a sore nipple is the following powder:

Take of Borax, one dram;
Powdered starch, seven drams;

Mix.—A pinch of the powder to be frequently applied to the nipple.

The following remedy for sore nipple is a very good one:

Take of—Finely-powdered Gum Arabic, half an ounce;
Powdered Alum, five grains;

Mix well together to make a powder. A pinch of it to be frequently applied to the sore nipple.

There is nothing in either of the above powders injurious to the infant, therefore not necessary to be wiped off, before applying him to the breast. Indeed, the former one, as it contains borax, is likely to be of service both in preventing and in curing the sore mouth of the child.

If the above powders should not have the desired effect, a liniment composed of equal parts of glycerine and brandy (say a vial containing two drams of each) should be tried. Shake the bottle before using and then by means of a camel's hair brush apply every time directly after the baby has been nursed. A piece of old soft cambric, about the size of the palm of the hand, snipped to make it fit, ought to be moistened in the glycerine and brandy, and applied to each of the sore nipples, whenever the child is not at the breast, and worn until they are cured. These applications will be

found of much more service and of great comfort, protecting and healing the nipples. A soft sponge of warm water should be gently applied to the nipples just before putting the child to the breast.

Sometimes the pure glycerine, *without the brandy*, painted on the sore nipple, does the most good; if the glycerine and brandy does not succeed, the pure glycerine should be tried; there is nothing in the pure glycerine injurious to the child. Equal parts of collodion and castor oil form a preferable application to collodion alone for sore nipples. Excoriations and fissures of the nipples are more readily healed by this than any other application.

Cracked and fissured nipples.—Sometimes the nipple is sore from having either cracks or fissures upon it. These cracks or fissures may attack any part of the nipple, but are very apt to form where the nipple joins the breast.

Treatment.—A good remedy for a *cracked* and *fissured* nipple is for the infant to nurse through a nipple shield; and every time, directly after the babe has nursed, apply to the parts affected, brandy and glycerine. When the child is not at the breast the metallic shield should be worn.

The nipple ought, after nursing, to be thoroughly dried by means of soft linen or cambric, and then apply the collodion and castor oil mixture. The result will be most satisfactory.

A nursing mother is sometimes annoyed by the milk *flowing away constantly*, making her wet and

uncomfortable. All she can do under such circumstances is to wear nipple glasses, and to apply a piece of flannel to the bosom, which will prevent the milk from chilling her, and will thus do away with the danger of her catching cold, etc.

If there is a supply of milk in the breasts, and the child will not nurse, the doctor's attention ought to be drawn to the fact, in order that he may ascertain whether the babe is tongue-tied; if he is, a trifling, painless operation will soon make all right.

Gathered breast.—A healthy woman with a well-developed breast and a *good* nipple scarcely, if ever, has a gathered breast.

A gathered breast is more likely to occur after a *first* confinement, and during the *first* month. Great care, therefore, ought to be taken to avoid such misfortune. A gathered breast is frequently owing to the carelessness of a mother in not covering her breast while nursing. Too much attention cannot be paid to keeping the breasts *comfortably* warm. This should be done by throwing either a shawl or a square of flannel over the neck, shoulders and breasts.

Another cause of gathered breasts arises from a mother sitting up in bed to nurse her babe. He ought to be accustomed to take the breast while she is lying down; if this habit is not at first instituted, it will be difficult to adopt it afterward. Good habits may, from earliest babyhood, be taught a child.

A sore nipple is another fruitful cause of a gathered breast. A mother, in consequence of the suffering it produces, dreads putting the babe to it; she therefore keeps him almost entirely to the other breast. The result is, the breast becomes distended with milk, which, being unrelieved, ends in inflammation, and subsequently in gathering.

There are two forms of gathered breast; one being of vast, and the other of trifling importance. The first, the serious one, consists of gathering of the *structure of the mammary gland;* the latter merely of the *superficial part*, and ought to be treated in the same manner as any other *external* gathering, with warm poultices.

In the *mild* or superficial kind of gathered breast, the mother may still persevere in nursing her child, as the secreting portion of the breast is not at all implicated in the gathering; but in the *severe* form, she ought not to do so, but should instantly wean her child from the affected side. The *healthy* breast she may continue to nurse from.

A severe gathered breast is *always* ushered in with a severe chill; the more severe the gathering, the longer the chill lasts. Let this fact be impressed deeply upon the mother's mind, as it admits of no exception. This shivering is either accompanied or followed by sharp, lancinating pains. The breast now greatly enlarges, becomes hot, and *is very painful.* The milk in the affected breast either lessens or entirely disappears. If the child is applied to the breast (which ought not to

be), it gives the mother *intense* pain. She is feverish and ill, she is hot one minute, and cold the next—feeling as though cold water were circulating with the blood in her veins; she loses her strength and appetite, and is very thirsty; she feels, in fact, very ill.

A doctor must, at the very *onset* of the chill, be sent for; and he will usually be able to prevent such painful and distressing occurrence as a gathered breast. If twelve hours elapse after the chill has taken place, the chances are that the gathering cannot be prevented; although, even then, it may, by judicious treatment, be materially lessened.

We sometimes hear of a woman suffering for months, and of having a dozen holes in her breast! This is generally due to a neglect in sending for the doctor *immediately* after the chill; I cannot too strongly insist, under such circumstances, upon obtaining *prompt* assistance; not only to obviate present suffering, but to prevent the function of the breast from being injured.

When once a woman has had the severe form of gathered breast, she ought, in all subsequent confinements, before nursing her babe, to obtain the express permission of the doctor to do so, or she may have a return of the gathered breast, and the concomitant pain, misery and annoyance. The reason of the above is obvious—the function of the breast, in a severe gathering, might be irreparably injured; so that, in all subsequent confinements,

the very attempt of nursing may, instead of inducing secretion of milk, set up inflammatory action, terminating in gathering of the breast.

When a nursing mother *feels faint*, she ought *immediately* to lie down and take a little nourishment; a cup of beef tea with the yolk of an egg beaten in it, will answer the purpose extremely well.

A mother is sometimes faint from nursing her child too often. As long as she continues this foolish practice, she must expect to suffer from faintness. When a nursing mother feels faint it is often an indication that the child is robbing her strength, and tells her, in unmistakable language, that she must give him artificial food, or wean him altogether. Warnings of faintness during nursing, are not to be disregarded.

Aperients, etc., during nursing.—Strong purgatives during this period are highly improper, as they are apt to give pain to the infant, as well as to injure the mother. An enema, either of warm water alone, or of gruel, oil and table salt,* administered by a good fountain syringe, is an excellent method of opening the bowels, as it neither interferes with the digestion of the mother nor of the child.

The less laxative medicine a nursing mother takes, the better will it be for herself and her infant. If the bowels will not act, an enema is by

*Two tablespoonfuls of olive oil, two tablespoonfuls of table salt, and a pint of warm oatmeal gruel.

far the best remedy; you can never do any harm, either to the mother or to the babe, by the administration of an enema; it will neither induce future constipation, nor interfere with the digestion of the mother, nor with the bowels, nor with the health of the infant. For habitual constipation follow the directions in Chapter V.

Weaning.—There is an old saying, "That a woman should carry her child nine months, and should nurse him nine months." It is well known that the first part of the old adage is correct, and experience has proved the latter to be equally so. If a babe is weaned *before* he is nine months old he loses that muscular strength which the breast milk alone can give; if he is nursed *after* he is nine months, he becomes pallid, flabby, weak and delicate. It is generally recognized that the healthiest children are those weaned at nine months complete. Prolonged nursing hurts both child and mother; in the child, causing a tendency to brain disease, probably through disordered digestion and nutrition; in the mother, causing a strong tendency to deafness and blindness. It is a very singular fact, that in those districts of Scotland where the mothers nurse their infants from fourteen to eighteen months, deaf-dumbness and blindness prevail to a very much larger extent among the people than in districts where nine or ten months is the usual limit of the nursing period.

The time, when an infant should be weaned, must depend upon the strength of the child, and upon

the health of the mother; nine months on an average being the proper time. If she is delicate, it may be found necessary to wean him at six months; or if he is weak, or laboring under any disease, it may be well to continue nursing him for twelve months; but after that time the breast will do him more harm than good, and will injure the mother's health.

If nursed after he is twelve months old, he is generally pale, flabby, unhealthy, and rickety; and the mother is usually nervous, emaciated, and hysterical. A child who is nursed beyond the proper time, more especially if there is any predisposition, sometimes dies either of water on the brain, of consumption, or of mesenteric disease.

The manner in which a mother should wean her child.—She must, as the word signifies, do it gradually—that is she should by degrees give him less and less of the breast, and more and more of artificial food; she ought at length only to nurse him at night, and lastly, it would be well for the mother either to send him away or to leave him at home, and for a few days go away herself.

A good plan is to have in the bed a half-pint bottle of new milk, which, to prevent it from turning sour, has been previously boiled, so as to give a little to the child in place of the breast. The warmth of the body will keep the milk of a proper temperature, and will supersede the use of lamps, of candle frames, and all other troublesome contrivances.

If the mother is not able to leave home herself, or to send her child *from* home, she ought to let him sleep in another room, with some *responsible* person—I say *responsible* person, for a babe must not be left to the tender mercies of a giggling, thoughtless young girl.

If the mother, during the daytime, cannot resist having the child in the room with her, then I should advise her to make a paste of aloes—mix a little powdered aloes with a few drops of water, until of the consistence of paste—and smear a little of it on the nipple every time just before putting him to the breast; this will be *quite* enough, and one or two aloe-applications to the nipple will make him take a disgust to the breast; and thus the weaning will be accomplished. A mother need not be afraid that the aloes will injure her babe; the *minute* quantity he will swallow will do no harm; for the moment he tastes it, the aloes being extremely bitter, he will sputter it out of his mouth.

The best way of *drying up the milk* is to apply to each breast soap plaster spread on soft pieces of wash leather, the shape and size of the top of a hat, with a round hole in the middle of each to admit the nipple, and with a slit from the center to the circumference of each plaster to make a better fit. These plasters ought to be spread by a druggist.

When the child is weaned, the breasts ought *not* to be drawn, as drawing them would cause

them to secrete larger quantities of milk; if the breasts are ever so full or uncomfortable, a mother ought to leave them alone; she should wait patiently, and the milk will gradually diminish, and at length disappear.

Drawing the breasts during weaning, either by a breast pump, the mouth, or other contrivances, has frequently caused gathered breasts. If not drawn, they rarely ever gather.

The above plan will generally in five or six days greatly lessen the flow of milk, but if, at the end of three days, the breasts still continue full and uncomfortable, the plasters should be removed, and the breast ought every four hours to be well but tenderly rubbed with equal parts of olive oil and *eau de Cologne*.

Symptoms denoting the necessity of weaning.—A mother sometimes cannot nurse her child; the attempt bringing on a train of symptoms somewhat similar to the following—ringing in the ears; dimness of sight, aching of the eyeballs, throbbing in the head, nervousness, hysterics, tremblings, faintness, loss of appetite and of flesh, fluttering and palpitation of the heart, feelings of great exhaustion, indigestion, costiveness, sinking sensations of the stomach, pains in the *left* side, great weakness and dragging pains of the loins, which are usually increased whenever the infant is put to the breast; pallor of the countenance, shortness of breath, swelling of the ankles.

Every mother who is suffering from nursing

does not have the *whole* of the above long catalogue of symptoms! But if she has three or four of the more serious of them, she ought not to disobey the warnings, but should discontinue nursing; although it may be necessary, if the babe is not strong enough to wean, to obtain a healthy wet nurse to take her place.

Remember, that if the above warning symptoms are disregarded, dangerous consequences may result. It might either throw the mother into consumption, or bring on heart disease; and in consequence of his not being able to obtain sufficient or proper nourishment, it might cause the infant to pine away, and eventually to die either of water on the brain, or of atrophy.

If there is during any period of nursing, a sudden and great diminution of milk in the breasts, the chances are that the mother is again *enciente;* the child should be either weaned, or supplied with a healthy wet nurse. It is most injurious both to parent and to child, for a mother, when she is pregnant, to continue nursing.

Soon after nine months' nursing the monthly periods generally return. This is another warning that the babe ought *immediately* to be weaned, as the milk will lessen both in quantity and in nourishment, and the child in consequence will become delicate and puny, and every day he is nursed will lose, instead of gain, ground. I have known many children become, from protracted nursing, smaller at twelve months than they were at nine months.

When the nipples are persistently very sore, it is often an indication that a mother ought to wean her babe. Long-continued, obstinate sore nipples frequently occur in a delicate woman, and speak in language not to be misunderstood, that the child, as far as the mother herself is concerned, must be weaned. Of course, if the infant is not old enough to wean, a wet nurse ought to take the mother's place. If the above advice were more frequently followed, gathered breasts, much suffering and broken health would not so frequently prevail as they now do.

If a mother is predisposed to consumption; if she has had spitting of blood; if she is subject to violent palpitation of the heart; if she is laboring under great debility and extreme delicacy of constitution, she ought not, on any account, to nurse her child, but should, by all means, procure a healthy wet nurse.

A mother, when weaning her child, should live very abstemiously; she should avoid highly spiced and rich dishes, and *stimulants of all kinds;* she should drink very little fluid; she should, as much as possible, be out of sight and hearing of her babe; she should rub her breasts three times a day, with warm camphorated oil. Once having weaned her child, she should not again put him to the breast. The less the breasts are meddled with the better; except it be to rub them with warm camphorated oil, or the application of soap plaster spread on wash leather to each breast.

CHAPTER XII.

INFANTS—AND HOW TO CARE FOR THEM.

A rose with all its sweetest leaves yet folded.—BYRON.

I deem it the imperative duty of every mother to *study* the following subjects well. The proper management of children is a vital question—a mother's question,—and the most important that can be brought under the consideration of a parent. Strange to say, it is one that has been more neglected than any other. How many mothers undertake the responsible management of children without previous instruction, or without forethought; they undertake it as though it may be learned either by intuition, by instinct, or by affection. The consequence is, that frequently they are in a sea of trouble and uncertainty, tossing about without rule or compass; until, too often, their hopes and treasures are shipwrecked and lost.

The care, management, and consequently the health and future well-doing of the child, principally devolve upon the mother; "for it is the mother after all that has most to do with the making or marring of the man." How many celebrated men have owed their greatness and their

goodness to a mother's training? Napoleon owed much to his mother. "The fate of a child," said Napoleon, "is always the work of his mother," and this extraordinary man took pleasure in repeating, that to his mother he owed his elevation. All history confirms this opinion. The character of the mother influences the children more than that of the father, because it is more exposed to their daily, hourly observation.

I am not overstating the importance of the subject in hand when I say that a child is the most valuable treasure in the world, that "he is the precious gift of God," that he is the source of a mother's greatest and purest enjoyment, that he is the strongest bond of affection between her and her husband, and that

> "A babe in a house is a well-spring of pleasure,
> A messenger of peace and love."—*Tupper.*

In the writing of the following pages, I have had one object constantly in view—namely, health—and if the following pages insist on the importance of one mother's duty more than another, it is this,—*that the mother herself look well into everything pertaining to the management of her child.* Blessed is that mother among mothers of whom it can be said, that she hath done what she could for her child—for his welfare, his happiness, and his health. If a mother hath not done what she could for her child—mentally, morally and physically—woe betide the unfortunate little creature, better for him had he never been born.

Ablution.—A new-born infant ought to be washed in warm water. It is not an uncommon plan to use *cold* water from the first, under the impression of its strengthening the child. This appears to be a cruel and barbarous practice, and is likely to have a contrary tendency, frequently producing inflammation of the eyes, stuffing of the nose, inflammation of the lungs, or looseness of the bowels. Although I do not approve of *cold* water, we ought not to run into an opposite extreme, as *hot* water would weaken and enervate the babe, and thus predispose him to disease. Lukewarm *rain* water is the best to wash him with. This, if in summer, should have its temperature gradually lowered, until quite cold; if in winter, a little warm water to be added, to take off the chill. (By thermometer = 90 to 92 degrees).

Castile soap should be used, and care should be taken that it does not get into the eyes, as it may produce inflammation or smarting of these organs. If the skin is delicate, or there are any excoriations or breaking-out, then glycerine soap, instead of Castile soap, ought to be used.

When the navel string comes away *a mother ought to commence washing her infant either in a tub, or a nursery basin.* Do not be afraid of water, as it is one of the best strengtheners to a child's constitution. How many infants suffer for the want of water, from excoriation! For the first part of the washing a piece of flannel is very useful to use with the soap, and to loosen the dirt and perspi-

ration, but for the finishing up process a large sponge is superior to flannel. A sponge cleanses and gets into all the nooks, corners, and crevices of the skin. Besides, it is softer and more agreeable to the tender skin of a babe than flannel.

Any tenacious, paste-like substance, adhering to the skin of a new-born babe ought to be washed off at the first dressing, if it can be done with a soft sponge and with care. Should there be any difficulty in removing the substance, gently rub it, by means of a flannel, either with a little lard, fresh butter, or sweet oil. After the parts have been well anointed and gently rubbed with the lard, oil or butter, wash off all by means of a sponge, soap and warm water, and then, to complete the process, gently put him for a minute or two in his tub. If this paste-like substance is allowed to remain on the skin, it might produce a breaking-out. Besides, it is impossible, if allowed to remain, for the skin to perform its proper functions.

A babe ought, every morning of his life, to be thoroughly washed from head to foot; and this can only be properly done by putting him bodily into a bath. The head, before placing him in the bath, should be wet, then, with a piece of flannel well soaked, cleanse his whole body, particularly his arm-pits, his thighs, and his groins; then take a large sponge in hand, and allow the water from it to stream all over the body, particularly over his back and loins. Follow this advice and you

will find the plan most strengthening to your child. After every bath, the skin must be thoroughly but quickly dried with warm, dry, soft towels.

The ears must be carefully and well dried with a soft, dry napkin; inattention to this advice has sometimes caused a gathering in the ear, and at other times it has produced deafness. Directly after the infant is dried, all the parts that are at all likely to be chafed ought to be well powdered; after he is well dried and powdered the chest, back, bowels, and limbs should be gently rubbed, taking care not to expose him unnecessarily during such friction.

He ought to be partially washed every evening; indeed, it may be necessary to use a sponge and warm water during the day, each time after the bowels have been relieved. *Cleanliness is one of the great incentives to health*, and therefore cannot be too strongly insisted upon. If more attention were paid to this subject, children would be more exempt from chafings, breakings-out, and consequent suffering, than at present. After the second month, if the babe is delicate, the addition of two handfuls of table salt to the water will tend to brace and strengthen him.

With regard to the best powder to dust an infant with, there is nothing better for general use than starch—the old-fashioned starch *made of wheaten flour*—reduced by means of a pestle and mortar to a fine powder; or Violet Powder, which

is nothing more than finely powdered starch scented, and which may be procured of any druggist. Some are in the habit of using white lead, but as this is poison, it ought, *on no account*, to be used.

If the parts about the groin and fundament are excoriated, after sponging them with tepid *rain* water, there is nothing better than dusting the parts frequently with finely powdered Native Carbonate of Zinc-Calamine Powder. The best way of using this powder is to tie up a little of it in a piece of muslin and then gently patting the parts with it.

Remember, excoriations are generally owing to the want of water—to the want of an abundance of water. An infant who is well bathed every morning seldom suffers from excoriations, or from any of the numerous skin diseases. Cleanliness is the grand preventive and the best remedy for excoriations.

n infant's clothes, napkins especially, ought never to be washed with soda; the washing of napkins with soda is apt to produce excoriations and breaking out. As washerwomen often deny that they use soda, it can be easily detected by simply soaking a clean white napkin in fresh water and then tasting the water; if it is brackish and salt, soda has been employed.

Further advice on the question of the ablution.—It is dangerous for a babe to remain for a long period in a bath; this holds good in a tenfold degree if

the child has a cold or pain in his bowels. Take care that, after he comes out of his tub, he is well dried with warm towels. It is well to let him have his bath the first thing in the morning, and before he has been put to the breast. Besides, he ought to have his morning ablution on an empty stomach, or it may interfere with digestion, and might produce sickness and pain. In putting him in his tub, let his head be the first part washed. We all know, that in bathing in the sea, how much better we can bear the water if the head is first wet. If this is not done we feel shivering and starved and miserable. Let there be no dawdling in the washing; let it be quickly over. When he is thoroughly dried let him be well rubbed with the warm hand of the mother. While drying let him repose, kick and stretch either on the warm flannel apron, or else on a small blanket placed on the lap. One bath in the tub, and that in the morning, is sufficient, and better than night and morning.

Remember, it is absolutely necessary to every child from his earliest babyhood to have a bath, to be immersed every morning of his life in the water. This advice, unless in cases of severe illness, admits of no exception. Water to the whole body is a necessity of life; health and happiness; it wards off disease, braces the nerves, hardens the frame, and is the finest tonic in the world. Oh, if every mother would follow to the very letter this counsel how much misery, how much ill-health might be averted!

The navel string should be wrapped in a piece of fine old linen, unsinged; when singed it frequently irritates the infant's skin.

Take a piece of soft linen, about three inches wide and four inches long, and wrap it neatly round the navel string, in the same manner you would around a cut finger, and then tie it with a few rounds of white thread. The navel string thus covered should, pointing upward, be placed on the belly of the child, and must be secured in its place by means of a flannel belly-band.

If after the navel string has been secured, bleeding should occur, the attendant ought immediately to take off the covering and tightly retie the navel string. To make assurance doubly sure, after once tying it, she should pass the threads a second time around the navel string, and tie it again. After carefully ascertaining that it no longer bleeds, fasten it up as before. Bleeding of the navel string rarely occurs, yet in case it should, if the above directions are not adopted, the child's after health, or even his life, may be endangered.

The navel string separates from the child from five days to a week after birth; in some cases not until ten days or two weeks, or, in rare cases, not until three weeks. If the navel string does not come away at the end of a week, nothing should be done to cause the separation. It ought always to be allowed to drop off. Meddling with the navel string has frequently cost the babe a great deal of suffering, and in some cases even his life.

The navel is sometimes a little sore after the navel string comes away, in which case a little simple cerate or cosmoline should be spread on lint, and be applied every morning to the part affected, and a white bread poultice, every night, until it is quite healed.

A rupture of the navel is sometimes occasioned by a meddlesome nurse. She is very anxious to cause the navel string to separate from the infant's body, more especially when it is longer in coming away than usual. She therefore forces it away. The rupture, at another time, is occasioned by the child incessantly crying. A mother should always bear in mind, that a rupture of the navel is often caused by much crying, and that it occasions much crying; indeed, it is a frequent cause of incessant crying. A child, who, without any assignable cause, is constantly crying, should have his navel carefully examined.

A rupture of the navel ought always to be treated early—the earlier the better. Ruptures of the navel can only be *cured* in infancy and childhood. If allowed to run until adult age, a *cure* is impossible. Palliative means only can be adopted.

The best treatment is a Burgundy pitch plaster, spread on a soft piece of wash leather, about the size of the top of a tumbler, with a properly-adjusted pad (made from the plaster) fastened on the center of the plaster, which will effectually keep up the rupture, and in a few weeks will cure it. It will be necessary, from time to time, to renew

the plaster until the cure is effected. These plasters will be found more efficacious and pleasant than either truss or bandage; which appliances sometimes gall, and do more harm than good.

A groin rupture can also be cured, if properly attended to. Consult a doctor, and he will supply you with a well-fitting truss, *which will eventually cure him.* If the truss is properly made by a skillful surgical-instrument maker, a nicely-fitting one will be supplied, which will take the proper and exact curve of the lower part of the infant's abdomen, and will thus keep on without using any under-strap whatever—a great desideratum, as these under-straps are so constantly wetted and soiled as to subject the patient to cold. But if this under-strap is to be superseded, the truss must be made exactly to fit the child—a very difficult thing to accomplish unless fashioned by a skilful workman.

These groin ruptures require great attention and supervision, as the rupture (the bowel) must, be cautiously and thoroughly returned into the abdomen before putting on the truss, and much care should be used to prevent the chafing and galling of the tender skin of the babe, which an ill-fitting truss will be sure to occasion. The truss must not be discontinued until a *perfect* cure is effected.

Let me strongly urge you to see that this advice is carried out to the very letter, as a groin rupture can only be *cured* in infancy and in childhood. If allowed to run until adult age, he will be obliged to wear a truss *all his life*, which would

be a great annoyance and a perpetual irritation to him.

Clothing.—The flannel belly-band ought to be moderately, but not tightly applied. If tightly applied it would interfere with the necessary movement of the bowels. When the child is two or three months old, *the belly-band should be discontinued.* The best way of leaving it off is to tear a strip off daily for a few mornings, and then leave it off altogether.* Nurses who take charge of an infant when the monthly nurse leaves, are frequently in the habit of leaving off the belly-band at once, which often leads to ruptures when the child cries or strains. It is far wiser to retain it too long than too short a time; should a child catch whooping-cough, while still very young, it is wise to resume the belly-band.

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* Much has recently been said and written on the subject of dress for infants There are those, eminent in the medical profession, who are strongly in favor of discarding all bandaging. These contend that bandages are unnecessary and unnatural, and ought not to be used. In a lecture delivered at the Chicago Homœopathic Medical College, L. C. Grosvenor, M. D., says:

A few years ago, when attending at the birth of a child, I chanced to be the only *old lady* present, competent and willing to make the little one's first toilet.

Now, when we old ladies of the male persuasion attempt to do anything, we like to do it well. I got along nicely with the bath, but when the wardrobe was brought in, it set me to thinking again, as it had done many times before, upon the very inconvenient and harmful way in which we dress our infants.

In the first place, here was a little bandage to go two or three times around the body over the navel dressing, and to be pinned with four pins—and you know it is customary to wear this until the child goes into short clothes, or even through the second summer. Now, the Creator has made the abdominal wall elastic for a purpose—to accommodate itself to the varying conditions of the child's digestion. If it has a full meal the wall is large enough, and if it has eaten little it is

none too large. If there is wind in the bowel the abdomen distends and gives it room till it can find its way through sixteen feet of convoluted intestine. The bandage destroys all this elasticity and defeats the Creator's plans in the matter.

"But," say the old ladies, "we *must* put on a bandage and put it on snugly. or the baby will be ruptured, or big-bellied, and all out of shape." Nonsense! Nature does not do her work in such a careless way.

When the infant cries lustily this elastic wall distends evenly in all directions, and if not bandaged seldom ruptures. It is the bandaged babies who rupture.

Let us see! The band was well applied in the morning, but in the constant motion so characteristic to the young of all animals, it is partially displaced, compressing a portion of the abdomen but exposing the umbilicus, which now has to take the whole pressure, and bursts, and we have an umbilical hernia. "But," says the grandmother or nurse, "I do not apply the band in any such careless way. I adjust it evenly and put in four pins, the lower one through the diaper to hold it down." What happens now? The child cries, and the chance of distension being gone, he ruptures into the scrotum if a boy, or in the femoral region if a girl—surely not a very desirable condition.

No. I would dress the navel with a pad of absorbent cotton and a light band held by two pins, just enough to retain the navel dressing, and discard the band when the navel dressing comes off.

The matrons and nurses will oppose this encroachment upon time-honored customs, but a little tact and explanation will win them to your way of thinking. I have seen only one ruptured baby in twenty years among the unbandaged.

The next article that I came across was a little shirt, made of linen —the coldest goods in the world—starched stiff at that, and having saw-teeth around the neck to keep the baby irritable. Surely this should have no place in the infant's wardrobe. It is neither comfortable to the child, nor convenient to the mother.

Then came the pinning blanket, one of the most uncomfortable and unhealthy garments ever invented, Let us see: The chest wall is made to expand and contract at every inspiration and expiration. The ribs do not pass around the body like a barrel hoop, but curve downward and upward from the sternum to the spine in such a way as to favor this expansion and contraction—and we put on this pinning blanket, whose band is made of unelastic material close up under the arms, and pin snugly—over two fingers is the rule—and so spoil all the expansive power of the chest during the first weeks and months of the infant life. We forget that within these thoracic walls are great vital organs, which, during these beginnings of life should have the freest play. Who shall say that much of the Phthisis pulmonalis and other lung diseases which scourge our land have not one, at least, of their predisposing causes right here? But I have another indictment against this absurd pinning blanket. One side is folded over

one limb and the other over the other, and then the bottom is folded upon the thighs and pinned so that the little one cannot move a limb, at which he cries, and we say Colic! and commence to dose him. This garment is an abomination, and should be thrown away.

After this comes the skirt, which has the same objection as the pinning blanket—tightness about the chest. Another objection I have to all these is, that they clothe the chest warmly and leave the shoulders with only a slight covering of muslin—the dress. How a more uncomfortable, unphysiological, or inhuman dress could be invented I can hardly see. The attention of the Humane Society should be called to it.

While I am aware it is easy to find fault, but not so easy to show a better way, I am confident I can give you something indefinitely better, in "The Gertrude Baby Suit" (this suit takes its name from my own little daughter, Gertrude, for whom they were first designed, some years ago, and who helped beautifully to illustrate my parlor talks on this subject), entirely free from all these objections, perfectly healthful and beautiful, and *very* convenient to the mother in using; then, too, the baby now handles like a baby.

The under garment should be made of nice fleecy goods—Canton flannel is the best we have at present—cut princess, reaching from the neck to ten inches (twenty-five inches long) below the feet, with sleeves to the wrists, and having all the seams smooth, and the hems at the neck, wrist and bottom upon the outside—the latter turned over once and felled or cat-stitched with colored worsted—a tie and button behind. Here you have a complete fleece-lined garment, comfortable and healthy, and one that can be washed without shrinking. The next garment is made of baby flannel (woolen), also cut princess, same pattern, only one-half inch larger, reaching from the neck to twelve or fourteen inches below the feet—to cover the other—with generous armholes pinked or scalloped, but not bound, and with two buttons behind at the neck, and may be embroidered at pleasure. The dress cut princess to match the other garments is preferable.

The ordinary baby dresses are all right except that I would have them only from thirty inches to a yard in length.

Now, these garments are put together before dressing—sleeve within sleeve—and then are put over the little one's head at once and buttoned behind, and the baby is dressed, there being but *one* pin—a diaper pin—in baby's dress instead of *fifteen*. No shoulder blanket should be used, because it is sometimes over the head, sometimes about the shoulders and neck, and sometimes off entirely, and these changes are exposures. Accustom the little one from the first to go without it.

At night the dress should be simply a Canton flannel nightdress and a diaper—the dress being not unlike the under garment in the suit, only a little longer. It is absurd to think that a child can rest sweetly in a diaper, a bandage, a pinning blanket, a skirt and a double gown, as many a child is expected to do. A good rule is to

A babe's clothing ought to be light, warm, loose, and free from pins. *It should be light*, without being too airy. Many infants' clothes are both too long and too cumbersome. It is really painful to see how some poor little babies are weighted down with a weight of clothes. They may be said to bear the burden, and that a heavy one, from the very commencement of their lives. How absurd, too, the practice of making them wear *long* clothes. Clothes to cover a child's feet, and even a little beyond, may be desirable; but for clothes, when the infant is carried about, to reach

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"dress the little one as you would love to be dressed if you were a babe." There is nothing wonderful about this simple dress. The only wonder is that we have dressed our little ones so badly so long.

If your husband and I were to go into business together, we would sit down and calculate and say: How can we obtain the best results with the least outlay of money or labor, and make our business abreast of the freshest thought of to-day? But when our young mothers go into the business of dressing their first little one, they do not ask, "How can I dress the child best in the physiological light of to-day? How can I dress it so that it will be perfectly comfortable and healthy? How can I dress it with the greatest ease and comfort to myself?" but, "How did my grandmother do this?" So they go b ck fifty years for their models. All honor to our grandmothers, they did beautifully in the light they had—but if our girls of to-day do not do better than their grandmothers, they do very badly. The main advantages of this method are:

1. Perfect freedom to all thoracic, abdominal and pelvic organs.
2. That all the clothing shall hang from the shoulders.
3. The greatest saving of the time and strength of the mother in caring for the babe, there being one pin instead of fifteen.
4. The resulting health and comfort of the child.
5. The evenness of the covering of the body, there being the same covering over the shoulders as elsewhere.

Let us make the physical life of our babies so perfect and happy as to realize the words of Wordsworth: "Heaven lies all about us in our infancy."

to the ground, is foolish and cruel in the extreme. I have seen a delicate baby almost ready to faint under the infliction. *The clothing should be warm*, without being too warm. The parts that ought to be kept warm are the chest, bowels, and feet. If the infant is delicate, especially if subject to inflammation of the lungs, he ought to wear a fine flannel, instead of his shirts, which should be changed as frequently. *The dress should be loose*, so as to prevent any pressure upon the bloodvessels, which would otherwise impede the circulation, and thus hinder a proper development of the parts. It ought to be loose about the chest and waist, so that the lungs and heart may have free play. It should be loose about the stomach, so that digestion may not be impeded; it ought to be loose about the bowels, in order that the spiral motion of the intestines may not be interfered with—hence the importance of putting on a bandage moderately slack; it should be loose about the sleeves, so that the blood may course without hindrance, through the arteries and veins; it ought to be loose everywhere, for nature delights in freedom from restraint, and will resent, sooner or later, any interference. Oh, that a mother would take common sense, and not custom, as her guide! *As few pins* should be used in the dressing of a baby as possible. Inattention to this advice has caused many a little sufferer to be thrown into convulsions.

When an infant is sent out for exercise in the

winter time, be sure that he is well wrapped. He ought to have under his cloak a knitted worsted spencer, which should button behind; and if the weather is very cold, a shawl over all. He will then come from his walk refreshed and strengthened, for cold air is an invigorating tonic. In a subsequent paragraph I will indicate the proper age at which a child should be first sent out to take exercise in the open air.

In the summer the right time "for shortening a babe," as it is called, is at the end of two months; in the winter, at the end of three months. But if the right time should happen to be in the spring, let it be deferred until the end of May, as the spring is usually very trying and treacherous; and sometimes, in April, the weather is almost as cold, and the wind as biting as in winter. It is treacherous, for the sun is hot, and the wind at this time of the year is frequently easterly, and is keen and cutting. I should far prefer *to shorten* a child in the winter than in the early spring.

Diet.—The infant ought to be given the breast soon after birth; the interest, both of mother and child, demand it. It will be advisable to wait two or three hours, that the mother may recover from her fatigue, and then the babe must be put to the breast. If this is done, he will generally take the nipple with avidity.

It may be said, at so early a period that there is no milk in the breast; but such is not usually the case. There generally is a *little* from the very

beginning, which acts like a purgative medicine, and appears to be intended by nature to cleanse the system of the babe. But, providing there is no milk at first, the very act of nursing not only gives the child a notion, but at the same time causes a draught in the breast, and enables the milk to flow easily.

Of course, if there is *no* milk in the breast, wait a few hours, until the milk is secreted, before applying him again to the nipple.

An infant who is kept from the breast two or three days, and fed upon gruel, generally becomes feeble, and frequently will not take the nipple at all. Besides, there is a thick cream which, if not drawn out by the child, may cause inflammation and gathering of the breasts, and consequently, great suffering to the mother. Placing him *early* to the breast moderates the severity of the mother's after pains, and lessens the risk of her flooding. A new-born babe must *not* have gruel given to him, as it disorders the bowels, causes a disinclination to nurse, and thus makes him feeble.

If there is no milk at first, wait with patience; the child will not require artificial food for at least twelve hours. In the generality of instances, artificial food is not at all necessary, but if it should be needed, one-third of new milk to two-thirds of warm water, slightly sweetened with loaf sugar (or with brown sugar, if the babe's bowels have not been opened) should be given, in small quantities at a time, every four hours, until the

milk is secreted, and then it must be discontinued. The infant ought to be put alternately to each breast every few hours, until he becomes able to find nourishment.

I say *alternately* to each breast. *This is most important advice.* Sometimes a child, for some inexplicable reason, prefers one breast to the other, and the mother, to save a little contention, concedes the point, and allows him to have his own way. And what is frequently the consequence?—a gathered breast!

We frequently hear of a babe having no notion of nursing. This may generally be traced to bad management, to stuffing him with food, and thus giving him a disinclination to take the nipples at all.

If a baby were nursed at stated periods, he would only look for the breast at those times, and be satisfied. A mother is frequently in the habit of giving her child the breast every time he cries, regardless of the cause. The cause frequently is that he has been too often nursed—his stomach has been overloaded; the little fellow is consequently in pain, and he gives utterance to it by cries. How absurd is such a practice! We may as well endeavor to put out a fire by feeding it with fuel. An infant ought to be accustomed to regularity in everything, in times for nursing, for sleeping, etc. No children thrive so well as those who are thus early taught. Artificial food must not, for the first five or six months, be given, if the mother is *moderately* strong; if feeble, a *little* food

will be necessary. Many delicate women enjoy better health while nursing than at any other period of their lives. As a rule, when the child and the mother are tolerably strong, he is better *without artificial* food until three or four months old; then it will usually be necessary to feed him twice a day, so as gradually to prepare him to be weaned at the end of nine months. If it is ascertained, *past all doubt*, that a mother cannot nurse her child, then a healthy wet nurse should be procured, as the food which nature has supplied is superior to any invented by art. Never bring up a baby, if you can possibly avoid it, on *artificial* food. It is impossible to imitate, perfectly, the admirable and subtle chemistry of nature. The law of nature is, that a babe, for the first few months of his existence, shall be brought up by the breast; and Nature's law cannot be broken with impunity. In selecting a wet nurse, I would inquire particularly into the state of her health; whether she is of a healthy family, of consumptive habits, or if she or any of her family have the scrofula, ascertaining if there are any seams or swellings about her neck; any eruptions or blotches upon her skin; if she has a plentiful breast of milk, and if of good quality (which may readily be ascertained by drawing a little into a glass); if she has good nipples, sufficiently long for the baby to hold; that they are not sore; and if her own child is of the same or nearly of the same age as the one you wish her to nurse. Ascertain

whether she menstruates during nursing ; if she does, the milk is not so good and nourishing, and you had better decline taking her. Assure yourself that her own babe is strong and healthy, and that he is free from a sore mouth and from a breaking-out of the skin. Indeed, if possible to procure such a wet nurse, she ought to be from the country, of ruddy complexion, of clear skin, and between twenty and twenty-five years of age. The milk will then be fresh, pure, and nourishing.

I consider it of great importance that the infant of the wet nurse should be, as nearly as possible, of the same age as your own, as the milk varies in quality according to the age of the child. For instance, during the commencement of nursing, the milk is thick and creamy ; if given to a babe a few months old, it would cause derangement of the stomach and bowels. After the first few days, the appearance of the milk changes ; it becomes of a bluish-white color, and contains less nourishment. The milk gradually becomes more and more nourishing as the infant becomes older and requires more support.

In selecting a wet nurse for a very small and feeble babe, you must carefully ascertain that the nipples of the wet nurse are good and soft, and yet not very large ; if very large the child's mouth may not be able to hold them. You must note, too, whether the milk flows readily from the nipple into the child's mouth ; if it does not, he may not have strength to draw it, and he would

soon die of starvation. The only way of ascertaining whether the infant actually draws the milk from the nipple, is by examining the mouth of the child *immediately* after his taking the breast, and seeing for yourself whether there is actually milk in his mouth. The following extract, from "Playfair's Midwifery," explains the causes of mortality in hand-fed children:

"Much of the mortality following hand-feeding may be traced to unsuitable food. Among the poorer classes especially there is a prevalent notion that milk alone is insufficient; and hence the almost universal custom of administering various farinaceous foods, such as corn flour or arrowroot, even from the earliest period. Many of these consist of starch alone, and are therefore absolutely unsuited for forming the staple of diet, on account of the total absence of nitrogenous elements. Independently of this, it has been shown that the saliva of infants has not the same digestive property on starch that it subsequently acquires, and this affords a further explanation of its so constantly producing intestinal derangement. Reason, as well as experience, abundantly proves that the object to be aimed at in hand-feeding is to imitate as nearly as possible the food which nature supplies for the new-born child, and therefore the obvious course is to use milk from some animal, so treated as to make it resemble human milk as nearly as may be."

Artificial human milk.—An admirable plan of

treating cow's milk, so as to reduce it to almost absolute chemical identity with human milk has been devised by Professor Frankland, to whom I am indebted for permission to insert the recipe. I have followed this method in many cases, and find it far superior to the usual one, as it produces an exact and uniform compound. With a little practice nurses can employ it with no more trouble than the ordinary mixing of cow's milk with water and sugar. The following extracts from Dr. Frankland's work will explain the principles on which the preparation of the artificial human milk is founded: "The rearing of infants, who cannot be supplied with their natural food, is notoriously difficult and uncertain, owing chiefly to the great difference in the chemical composition of human milk and cow's milk. The latter is much richer in casein, and poorer in milk-sugar than the former, while asses' milk, which is sometimes used for feeding infants, is too poor in casein and butter, although the proportion of sugar is nearly the same as in human milk. The relations of the three kinds of milk to each other are clearly seen from the following analytical numbers, which express the percentage amounts of the different constituents:

	Woman.	Ass.	Cow.
"Casein	2.7	1.7	4.2
Butter	3.5	1.3	3.8
Milk-sugar	5.0	4.5	3.8
Salts	.2	.5	.7

"These numbers show that by the removal of

one-third of the casein from cow's milk and the addition of about one-third more milk-sugar a liquid is obtained which closely approaches human milk in composition, the percentage amounts of the four chief constituents being as follows:

"Casein	2.8
Butter	3.8
Milk-sugar	5.0
Salts	.7

"The following is the mode of preparing the milk: Allow one-third of a pint of new milk to stand for about twelve hours, remove the cream and add to it two-thirds of a pint of new milk, as fresh from the cow as possible. Into the one-third of a pint of blue milk left after the abstraction of the cream, put a piece of rennet about an inch square. Set the vessel in warm water, until the milk is fully curdled, an operation requiring from five to fifteen minutes, according to the activity of the rennet, which should be removed as soon as the curdling commences, and put into an egg cup for use on subsequent occasions, as it may be employed daily for a month or two. Break up the curd repeatedly, and carefully separate the whole of the whey, which should then be rapidly heated to boiling in a small tin pan placed over a spirit or gas lamp. During the heating a further quantity of casein, technically called 'fleetings,' separates, and must be removed by straining through muslin. Now dissolve 110 grains of powdered sugar of milk in the hot whey, and mix it with two-thirds

of a pint of new milk to which the cream from the other third of a pint was added as already described. The artificial milk should be used within twelve hours of its preparation, and it is almost needless to add that all the vessels employed in its manufacture and administration should be kept scrupulously clean."

"Never give the child the white rubber nipple nursing bottle, since it contains in its composition the carbonate of lead, which is a sure poison—sometimes slow, but none the less sure. I have watched the effects of the white rubber nipple for many years; have known cases of spinal curvature, one of complete humpback, often decayed teeth, innumerable cases of sore mouth, and dysentery or diarrhœa, many times causing death, large indolent boils on the scalp, eruptions behind the ears and in the folds of the neck, in consequence of nursing the rubber nipple. All rubber gum rings and toys should be avoided; indeed, I wish everything made from the white rubber could be banished from the nursery. Any babe can be fed at first with a spoon, and in a few weeks it will drink from a cup or glass. If any artificial nipple must be used one of silver, glass or porcelain can be procured. The black rubber may not be as objectionable as the white. I have known a very good artificial nipple to be made of fine sponge, with cambric linen covering it. A small quill stitched in thoroughly is passed through the center nearly to the cover, and by fitting the sponge over

the top of a small sized bottle, it answers a good purpose. The vessels and tubes can scarcely be kept clean of any nursing bottles, and here is another plea for teaching a child that must be fed, to drink from a cup or glass."

If for any reason it becomes impossible to follow the above directions, then give the following *milk-water-and-sugar-of-milk food:*

Fresh milk, from ONE cow;
Warm water, of each a quarter of a pint,
Sugar-of-milk, one teaspoonful.

The sugar-of-milk should first be dissolved in the warm water, and then the fresh milk *unboiled* should be mixed with it. The sweetening of the above food with sugar-of-milk, instead of with lump sugar, makes the food more resemble the mother's own milk. The infant will not, probably, at first take more than half of the above quantity at a time, even if he does so much as that; but still the above are the proper proportions, and as he grows older, he will require the whole of it at a meal. Or the following *milk-water-salt-and-sugar food*, should be given:

New milk, the produce of ONE *healthy* cow;
Warm water, of each, equal parts;
Table salt, a few grains—a small pinch;
Lump sugar, a sufficient quantity to slightly sweeten it.

The milk itself ought not to be heated over the fire,* but should, as above directed, be warmed by

*It now and then happens, that if the milk is not boiled, the motions of an infant are offensive; *when such is the case*, let the milk be boiled, but not otherwise.

water; it must be fresh morning and evening The milk and water should be of the same temperature as the mother's milk, viz., ninety degrees Fahrenheit. The milk should be gradually increased as the child grows older, and the water decreased, until two-thirds of milk and one-third of water is used, but remember, that either *much* or *little* water must *always* be given with the milk.

The great desideratum is to make the food resemble as much as possible a mother's own milk.

As soon as the child begins to cut his teeth the case is altered, and *farinaceous food, with milk and with water*, becomes an absolute necessity.

I wish to call especial attention to the following facts, for they are facts: Farinaceous foods, *of all kinds*, before the child *commences* cutting his teeth (which is when he is about six or seven months old) are worse than useless—they are positively injurious; they are, during the early period of infant life, perfectly indigestible, and may bring on convulsions. A babe fed on farinaceous food alone would certainly die of starvation.

A babe's salivary glands do not secrete its proper fluid—namely, ptyalin, and consequently the starch of the farinaceous food is not converted into dextrine and grape sugar, and is therefore perfectly indigestible and useless, nay, injurious to an infant, and may bring on pain, convulsions, and even death. The giving of farinaceous food until a child is six or seven months old, is one, and the principal cause of the frightful infant mor-

tality at the present time, and which is a disgrace to any civilized land!

After a child begins teething any of the following foods may be given: The food that suits one infant, however, will not agree with another. (1) The one that I have found the most useful, is made as follows: Boil the crumb of bread for two hours in water, taking particular care that it does not burn, then add only a *little* loaf-sugar (or *brown* sugar, if the bowels are costive) to make it palatable. Mix a little new milk—the milk of ONE cow—with it, gradually as it becomes older, increase the quantity until it is nearly all milk, there being only enough water to boil the bread; the milk should be poured boiling hot on the bread. Sometimes the two milks—the mother's and the cow's milk—do not agree; when such is the case, let the milk be left out, both in this and in the foods following, and make the food with water, instead of with milk and water. In other respects, until the child is weaned, make as above directed; when he is weaned, good fresh cow's milk MUST, as previously recommended, be used. (2) Or cut thin slices of bread into a basin, cover the bread with *cold* water, place it in an oven for two hours to bake; take it out, beat the bread up with a fork, and then slightly sweeten it. This is an excellent food. (3) Another good food is the following: Take about a pound of flour, put it in a cloth, tie it up tightly, place it in a saucepanful of water, and let it boil for four or five hours; then take it

out, peel off the outer rind, and the inside will be found quite dry, which grate. (4) Another way of preparing an infant's food, is to bake flour—biscuit flour—in a slow oven, until of a light fawn color. Baked flour ought, after it is baked, to be reduced, by means of a rolling-pin, to fine powder, and should then be kept in a covered tin, ready for use. (5) An excellent food for a baby is baked crumbs of bread, prepared as follows: Crumb some bread on a plate; put it a little distance from the fire to dry. When dry, rub the crumbs in a mortar, and reduce them to a fine powder, then pass them through a sieve. Having done this, put in a slow oven, and bake until they are of a light fawn color. A small quantity of the boiled, or baked flour, or the baked crumbs of bread, ought to be made into food, in the same way as gruel is made, and should then be slightly sweetened, according to the state of the bowels, either with loaf or brown sugar. (6) Baked flour sometimes produces constipation; when such is the case, a mixture of baked flour, and prepared oatmeal, in the proportion of two of the former and one of the latter, should be used. To avoid the constipating effects, I have always had mixed, before baking, one part of prepared oatmeal with two parts of flour; this compound I have found both nourishing and regulating to the bowels. One tablespoonful of it, mixed with a quarter of a pint of milk, or milk and water, when well boiled, flavored and sweetened with white sugar, produces a thick,

nourishing, and delicious food for infants or invalids. I know of no food, after repeated trials, that can be so strongly recommended by the profession to all mothers in the rearing of their infants, without or with the aid of the breasts, at the same time relieving them of much draining and dragging while nursing with an insufficiency of milk, as baked flour and oatmeal. (7) The following is a good and nourishing food for a baby: Soak for an hour some *best* rice in cold water, strain and add fresh water to the rice, then let it simmer till it will pulp through a sieve; put the pulp and the water in a saucepan, with a lump or two of sugar, and again let it simmer for a quarter of an hour; a portion of this should be mixed with one-third of fresh milk, so as to make it of the consistence of good cream. This is an excellent food for weak bowels. New milk should be added to any of the above articles of food, in a similar way to that recommended for boiled bread.

If a child's bowels are relaxed and weak, or if the motions are offensive, the milk *must* be boiled, but not otherwise. The following (8) is a good food when an infant's bowels are weak and relaxed: "Into five large spoonfuls of the purest water, rub smooth one dessert-spoonful of fine flour. Set over the fire five spoonfuls of new milk, and put two bits of sugar into it; the moment it boils, pour into it the flour and water, and stir it over a slow fire twenty minutes."

Where there is much emaciation, I have found

genuine arrowroot a very valuable article of food for an infant, as it contains a great deal of starch, which helps to form fat and to evolve heat; both of which a poor emaciated, chilly child stands so much in need of. It must be made with equal parts of water and of good fresh milk, and ought to be slightly sweetened with loaf sugar; a small pinch of table salt should be added to it.

Arrowroot will not give bone and muscle; but it will give—what is very needful to a delicate child—fat and warmth. It is principally composed of starch, and comes under the same category as cream, butter, sugar, oil and fat. Arrowroot should always be given with new milk (mixed with one-half of water); it will then fulfill, to perfection, the exigencies of nourishing, of warming, and fattening the child's body.

New milk is the only food, *which of itself alone*, will nourish, and warm and fatten. It is, for a child, *par excellence*, the food of foods!

Arrowroot, and all other farinaceous foods are, for a child, only supplemental to milk. Bear in mind, *and let there be no mistake about it*, that farinaceous food is *not* suitable for a child until he *begins* to cut his teeth; until then the "Artificial human milk" is the best food for a dry-nursed child.

I have given a large and well-tried infant's dietary to choose from, as it is sometimes difficult to fix on one that will suit; but remember, if one of the above agree, keep to it, as a babe requires a simplicity in food—a child a greater variety.

Let me insist upon the necessity of great care and attention being observed in the preparation of any of the above articles of diet. A babe's stomach is very delicate, and will revolt at either ill-made, lumpy, or burnt food. Great care ought to be observed as to the cleanliness of the cooking utensils. The above directions require the strict supervision of the mother.

Broths have been recommended, but I think they are objectionable for a *young* infant. They are apt to turn to acid on the stomach, and to cause flatulence and sickness. Sometimes they disorder the bowels, and induce griping and purging.

Whatever artificial food is used ought to be given by means of a bottle, not only as it is a more natural way than any other of feeding a baby, as it causes him to nurse as though he were drawing it from the mother's breasts, but as the act of nursing causes the salivary glands to press out their contents, which materially assists digestion; besides it seems to satisfy and comfort him more than it otherwise would do.

The food ought to be of the consistence of good cream, and should be made fresh each time. It ought to be given milk-warm. Very little sugar should be used in the food, as much sugar weakens the digestion. A small pinch of table salt ought to be added to whatever food is given. Salt is most wholesome—it strengthens and assists digestion, prevents the formation of worms, and, in

small quantities, may be given with advantage to the youngest babe.

When it is found necessary to give an infant artificial food while nursing, he ought not to be fed oftener than twice during the twenty-four hours, and then only in *small* quantities at a time, as the stomach requires rest, and can digest only a little food. Let me again urge upon mothers the importance, if at all practicable, of keeping the child *entirely* to the breast for the first five or six months of his existence. Remember, there is no absolute substitute for a mother's milk; there is no food so well adapted to his stomach; there is no diet equal in developing muscles, in making bone or in producing that beautiful plump rounded contour of the limbs; there is nothing like a mother's milk *alone* in making a child contented and happy, in laying the foundation of a healthy constitution, in preparing the body for a long life, in giving him tone to resist disease, or in causing him to cut his teeth easily and well; in short, *the mother's milk is the greatest temporal blessing an infant can possess.*

In passing, allow me to urge you never to stuff a babe—never to overload his little stomach; it is far more desirable to give him too little than too much. Many a poor child, like a young bird, is killed with stuffing. If a child is at the breast, and at the breast alone, there is no fear of his taking too much, but if brought up on artificial food, there is great fear of his overloading his

stomach. Stuffing a child brings on vomiting and bowel complaints, and a host of other diseases which would be tedious to enumerate. Let me urge you, on no account, to overload the stomach of a little child.

A *small* quantity of sugar in an infant's food is requisite, sugar being nourishing and fattening, and causing cow's milk to resemble somewhat in its properties human milk; but bear in mind, *it must be used sparingly. Much* sugar cloys the stomach, weakens the digestion, produces acidity, sour belchings and wind.

Dentition.—The period at which dentition commences is uncertain. It may be said that, as a rule, a babe begins teething when seven months old. Some have cut teeth at three months; indeed, there are instances on record of infants having been born with teeth. On the other hand, teething, in some children, does not commence until they are a year and a half or two years old, and, in rare cases, not until they are three years old. There are cases recorded of adults who have never cut any teeth. An instance of the kind came under my own observation. If an infant is feverish, irritable, or otherwise restless, and the gums hot, swollen and tender, lancing will, in the generality of cases, almost instantly relieve them.

It has been asserted that lancing the gums hardens them; this is a mistake—it has a contrary effect. It is a well-known fact, that a part which has been divided gives way much more readily

than one which has not been cut. Again, the tooth is bound down by a tight membrane, which, if not released by lancing, frequently brings on convulsions. If the symptoms are urgent, it may be necessary from time to time to repeat the lancing. But it would be the height of folly to lance the gums unless they are hot and swollen, and the tooth, or teeth, near at hand. It is not to be considered a panacea for every baby's ill, although in those cases where lancing the gums is indicated, the beneficial effect is sometimes almost magical.

The proper person to lance the gums is a doctor. But if, perchance, you should be miles away and out of reach of one, it would be well to know how the operation ought to be performed. Lay the child on the nurse's lap upon his back, and let her take hold of his hands in order that he may not interfere with the operation. Then, *if it is the upper gum* that requires lancing, go to the head of the child, looking over into his mouth, and steady the gum with the index finger of your left hand. Take the gum-lancet with your right hand—holding it as if it were a table-knife at dinner—and cut firmly along the inflamed and swollen gum and down to the tooth, until the edge of the gum-lancet grates on the tooth. Each incision ought to extend along the ridge of the gum to about the extent of each expected tooth.

If it is the lower gum that requires lancing, go to the side of the child and steady the outside of

the jaw with the fingers of the left hand, and the gum with the left thumb, and then perform the operation as before directed.

Although lancing gums to make it intelligible to a non-professional person, requires a long description, it is a simple affair, soon performed, and gives but little pain.

If teething causes convulsions, the first thing to be done is to freely dash water upon the face, and sponge the head with cold water. As soon as warm water can be procured, put the child into a warm bath* of 98 degrees Fahrenheit. If a thermometer is not at hand,† plunge your elbow into the water; a comfortable heat for your elbow will be a proper heat for the infant. He must remain in the bath for a quarter of an hour, or until the fit is at an end. The body must be wiped with warm, dry, coarse towels after coming out of the bath, then placed in a warm blanket. The gums must be lanced, and cold water should be applied to the head. An enema, composed of table salt, olive oil and warm oatmeal gruel—in the proportion of a tablespoonful of salt, to one of oil, and a teacupful of gruel—ought to be administered; and until the bowels have been well opened, should be repeated every quarter of an hour; as soon as he comes to himself laxative medicine ought to be given.

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*For the precautions to be used in putting a child into a warm bath, see the paragraph on "Warm Baths."

†No family, where there are young children, should be without Fahrenheit's thermometer.

It may be well, for the comfort of a mother, to state that a child in convulsions is perfectly insensible to all pain whatever; indeed, a return to consciousness speedily puts convulsions to the rout. A nurse is often in the habit of giving a child who is teething, either coral, or ivory, to bite. I think it a bad practice to give him any hard, unyielding substance, as it tends to harden the gums, and by so doing, causes the teeth to come through with greater difficulty. I have found softer substances, such as either piece of a wax taper, or a black India rubber ring, or a piece of the best bridle leather, of great service. The pressure of any of these excites a more rapid absorption of the gum, and thus causes the tooth to come through easily and quickly.

When a baby is cutting his teeth there is no objection to his sucking his thumb. The thumb is the best gum-stick in the world; it is convenient; it is handy (in every sense of the word); it is of the right size, and of the proper consistence, neither too hard nor too soft; there is no danger, as of some artificial gum-sticks, of its being swallowed, and thus of its choking the child. The sucking of the thumb causes the salivary glands to pour out their contents, and thus not only to moisten the dry mouth, but assist the digestion; the pressure of the thumb eases the pain and irritation of the gums, and helps to bring them through the gums. Sucking of the thumb will often make a cross infant contented and happy, and will frequently induce a restless babe to fall into a sweet, refresh-

ing sleep. By all means, then, let your child suck his thumb whenever he likes, as long as he chooses to do so. After he has cut the whole of his first set of teeth, if it is likely to become a habit, he may be readily cured by making a paste of aloes and water, and smearing it upon his thumb. One or two dressings will suffice, as after tasting the bitter aloes he will take a disgust to his former enjoyment, and the habit will be broken.

A child who is teething dribbles, and thereby wets his chest, which frequently causes him to catch cold. The best remedy is to have in readiness several *flannel* dribbling bibs, so that they may be changed as often as they become wet; or, if he dribbles *very much*, the oiled silk bibs may be used, instead of the flannel ones.

A child, during teething, should have little fruit, unless it is a few ripe strawberries, raspberries, a roasted apple, the juice of five or six grapes —taking care that he does not swallow either the seeds or the skin—the inside of ripe gooseberries, or an orange. Such fruits, if the bowels are in a costive state, will be particularly useful.

All stone fruits, *raw* apples or pears, ought to be carefully avoided, as they not only disorder the stomach and the bowels,—causing convulsions, gripings, etc.,—but they have the effect of weakening the bowels, and thus of engendering worms.

The teeth are a fruitful source of suffering and of disease; and are with truth styled our first and our last plagues. Dentition is the most important

period of a child's life, and is the exciting cause of many infantile diseases. During this period he requires constant and careful watching. When we consider how the teeth elongate and enlarge in his gums, pressing on the nerves and the surrounding parts, and how frequently they produce pain, irritation and inflammation; when we contemplate what sympathy there is in the nervous system, and how susceptible the young are to pain, no surprise can be felt at the immense disturbance, and consequent suffering and danger frequently experienced by children while cutting their *first* set of teeth. The complaints or diseases induced by dentition are numberless, affecting almost every organ of the body,—the *brain*, occasioning convulsions, water on the brain, etc.; the *lungs*, producing congestion, inflammation, cough, etc.; the *stomach*, exciting sickness, flatulence, acidity, etc.; the *bowels*, inducing griping, at one time costiveness, and at another time purging; the *skin*, causing eruptions.

To prevent these diseases, means ought to be used to invigorate a child's constitution by plain, wholesome food, as recommended under the article on the diet; by exercise and fresh air; by allowing him to be out of doors a great part of every pleasant day; by lancing the gums when they get red, hot and swollen; by attention to the bowels, and if he suffers more than usual, by keeping them rather in a relaxed state by any simple aperient; and, let me add, by attention to his temper; many

children are made feverish and ill by petting and spoiling them.

Painful dentition may be divided into two forms, the *mild* and the *severe.* In the mild form the child is peevish and fretful, and puts his fingers, and everything within reach, to his mouth; he likes to have his gums rubbed, and takes the breast with avidity; indeed, it seems a greater comfort to him than ever. There is generally a considerable flow of saliva, and a tendency to a relaxed condition of the bowels.

In the severe form the gums are red, swollen and hot, and he cannot bear to have then touched; hence at the breast, he is constantly losing the nipple. There is dryness of the mouth, although before there had been a great flow of saliva. He is feverish, restless, and starts up in his sleep. His face is flushed. His head is heavy and hot. He is sometimes convulsed. He is frequently violently griped and purged, and suffers severely from flatulence. He is predisposed to many and several diseases.

The *treatment* of the *mild* form consists of friction of the gum with the finger, with a little soothing syrup,* a tepid-bath of about 92 degrees Fahrenheit, every night at bedtime; attention to

* "Soothing syrup." Some of them probably contain opiates, but a perfectly safe and useful one is a little Nitrate of Potass in Syrup of Roses—one scruple to half an ounce. This soothing syrup is not intended to be given as a mixture; but to be used as an application to rub the gums with. It may be well to state that it is a perfectly harmless remedy, even if a little of it were swallowed by mistake.

diet and to bowels; fresh air and exercise. For the mild form, the above plan will usually be all that is required. If he dribbles, and the bowels are relaxed, so much the better; the flow of saliva and the increased action of the bowels afford relief, and must not be interfered with. In the *mild* form lancing of the gums is not desirable. The gums ought not to be lanced, unless the teeth are near at hand, and unless the gums are red, hot and swollen.

In the *severe* form a doctor should be consulted early, as more energetic remedies will be demanded; the gums will require lancing, warm baths will need to be used, and medicines to be given, to ward off mischief from the head, the chest and the stomach.

If you are living in town, and your baby suffers much from teething, take him into the country. It is wonderful what change of air will often do, in relieving a child who is painfully cutting his teeth. The number of deaths in cities from teething is frightful, in the country it is comparatively trifling.

Should an infant be purged during teething, or any other time, I should look upon the relaxation as an effort of nature to relieve itself. A child is never purged without a cause; that cause, in most instances, is the presence of some undigested food, acidity, or depraved motions, and no astringent medicine should be given. The better plan is to give laxatives such as either castor oil, or magnesia

and rhubarb, and thus work it off. IF WE LOCK UP THE BOWELS, WE CONFINE THE ENEMY, AND THUS PRODUCE MISCHIEF. If he is purged more than usual, attention should be paid to the diet, and care must be taken not to overload the stomach.

A child is subject to a slight cough during dentition, which is an effort of nature to bring up any secretion from the lining membrane of the lungs, or from the bronchial tubes, hence it ought not to be interfered with. I have known the administration of syrup of white poppies, or of paregoric, to stop the cough, and thereby to prevent the expulsion of the phlegm, and thus to produce either inflammation of the lungs, or bronchitis. Both paregoric and syrup of white poppies are dangerous medicines (unless administered by a judicious physician), and *ought never to be given by a mother.*

A child while teething, is subject to eruptions, more especially behind the ears—which is most disfiguring, and frequently very annoying. I would apply no external application to cure it, as I should look upon it as an effort of the constitution to relieve itself; and should expect, if the breaking-out were repelled, that either convulsions, or bronchitis, or inflammation of the lungs, or water on the brain, would be the consequence. The only plan I should adopt would be, to be more careful in his diet; to give him less meat (if he is old enough to eat animal food), and to give

him, once or twice a week, some mild laxative, and if the irritation is great, to bathe it occasionally with a little warm milk and water, or with rose water.

Exercise.—I am a great advocate of exercise in the open air. "The infant makes known its desire for fresh air, by restlessness; it cries, for it cannot speak its wants; is taken abroad, and is quiet." The age at which he ought to commence taking exercise will depend upon the season and the weather. If in summer, and the weather fine, he should be carried in the open air, a week or two after birth, but if it is winter, he ought not on any account be taken out under a month, and not even then, unless the weather is mild for the season, and during the middle of the day. At the end of two months he should breathe the open air more frequently. And after the expiration of three months he ought to be carried out *every day*. By doing this we shall make him strong and hearty, and give the skin that mottled appearance which is so characteristic of health. He must, of course, be well clothed.

I cannot help expressing my disapprobation of the practice of smothering up an infant's face with a handkerchief, a veil, or any other covering when he is taken out into the air. If his face is so muffled up, he may as well remain at home; as it is impossible for him to receive any benefit from the invigorating effects of the fresh air.

He must be encouraged to use muscular exertion;

and, for this purpose, he ought to be frequently laid upon a rug, or carpet, or the floor, where he can stretch his limbs and kick about with perfect glee. It is a pretty sight to see a little fellow kicking and sprawling on the floor. He crows with delight, and thoroughly enjoys himself; it strengthens his back, it enables him to stretch his limbs, and to use his muscles, and is one of the best kinds of exercise a very young child can take. While going through this exercise his diaper should be unfastened, in order that he may be untrammeled. By adopting the above plan the babe quietly enjoys himself—his brain is not over excited by it. This is an important consideration, for both mothers and nurses are apt to rouse and excite very young children to their manifest detriment. A babe requires rest, and not excitement. In the early period of his existence his time ought to be almost entirely spent in sleeping and in nursing!

Some mothers or nurses amuse their children by tossing them. Can anything be more cruel or absurd? Violent tossing of a young babe ought never to be allowed; it only frightens him, and has been known to bring on convulsions. He should be gently moved up and down (not tossed); such exercises cause a proper circulation of the blood, promote digestion, and soothe to sleep. He must always be kept quiet immediately after taking the breast; if he is tossed *directly* afterward, it interferes with his digestion, and is likely to produce sickness.

A new-born babe ought to be kept comfortably warm, but not very warm. It is folly in the extreme to attempt to harden a very young child either by allowing him, in the winter time, to be in a bedroom without a fire, or by dipping him in *cold* water, or by keeping him with scant clothing on his bed. The temperature of a bedroom in winter should be, as nearly as possible, at 60 degrees Fahr. Although the room should be comfortably warm, it ought from time to time to be properly ventilated. An unventilated room soon becomes foul and unhealthy. How many in this world, both children and adults, are poisoned with their own breaths!

An infant should not be allowed to look at the glare of a fire or a lighted candle, as it tends to weaken the sight, and sometimes brings on inflammation of the eyes. In speaking to, and in noticing a baby, you ought always to stand *before*, and not *behind* him, or it might make him squint.

A babe ought not to sleep alone from the first, say, for the first few months—he requires the warmth of another person's body, especially in the winter; but care must be taken not to overlay him, as many infants, from carelessness in this particular, have lost their lives. After the first few months he had better sleep alone, on a hair mattress.

I do not approve of rocking an infant to sleep. If the rules of health are observed, he will sleep soundly and sweetly without rocking; if they are

not, the rocking might cause him to fall into a feverish, disturbed slumber, but not into a refreshing, calm sleep. Besides, if you begin that habit, he will not go to sleep without it. A rocking chair, or rockers to the cradle, may be useful to a lazy nurse or mother, and may induce a child to sleep, but that restlessly, when he does not need sleep, or when he is wet and uncomfortable, and requires changing, but will not cause him to have that sweet and gentle and exquisite slumber so characteristic of a baby who has no artificial appliances to make him sleep. Rockers are perfectly unnecessary, and the sooner they are banished from the nursery the better will it be for the infant community. I do not know a more wearisome and monotonous sound than the everlasting rocking to and fro in some nurseries; they are often accompanied by a dolorous lullaby from the nurse, which adds much to the misery and depressing influence of the performance.

If the head of the crib is covered, the babe cannot breathe freely; the air within the crib becomes contaminated, and thus the lungs cannot properly perform their functions. If his sleep is to be refreshing, he must breathe pure air. I do not even approve of a head to a crib. An infant must have the full benefit of the air of the room; indeed, the bedroom door ought to be frequently left slightly open, so that the air of the apartment may be changed; taking care, of course, not to expose him to a draught. If the flies annoy him

while he is asleep, let a *net* veil be thrown over his face, as he can readily breathe through net, but not through a handkerchief.

Whenever he is put down to sleep, be more than usually particular that his dress is loose in every part; be careful that there are neither strings nor bands to cramp him. Let him during repose, be more than ordinarily free and unrestrained.

A babe who sleeps a great deal thrives much more than one who does not. I have known many children, who were born small and delicate, but who slept the greater part of their time, to become strong and healthy. On the other hand, I have known those who were born large and strong, yet who slept but little, become weak and unhealthy. The common practice of allowing a baby to sleep upon the nurse's lap is a bad one, and ought never to be countenanced. He sleeps cooler, and more comfortably and soundly in his crib. The younger an infant is the more he generally sleeps, so that during the early months he is seldom awake, and then only to take the breast.

If there is pain in any part of the body, or if any of the functions are not properly performed, he sleeps but little. On the contrary, if there is exemption from pain, and a due performance of all the functions, he sleeps a great deal; and thus the body becomes refreshed and invigorated.

Much sleep is of great advantage, still if an infant sleeps but little, composing medicine ought not to be given to him. The practice of giving

composing medicine to a young child cannot be too strongly reprobated. If he does not sleep enough the mother ought to ascertain if the bowels are in a proper state, that the motions are of a good color—a bright yellow, inclining to orange—and free from slime or from bad smell. An occasional dose of rhubarb and magnesia is frequently the best composing medicine he can take.

We often hear of coroner's inquests upon infants who have been found dead in bed—accidentally overlaid,—usually the cause is suffocation, produced either by ignorance, or by carelessness. From *ignorance* in mothers, in their not knowing the common laws of life, and the vital importance of free and unrestricted respiration, not only when babies are up and about, but when they are in bed and asleep. From *carelessness,* in their allowing young and thoughtless servants to have the charge of infants at night; more especially as young girls are usually heavy sleepers, and are thus too much overpowered with sleep to attend to their necessary duties.

A foolish mother sometimes goes to sleep allowing her child to continue nursing. The unconscious babe, after a time, loses the nipple, and buries its head in the bedclothes. She awakes in the morning, finding, to her horror, a corpse by her side, with his nose flattened, and a frothy fluid, tinged with blood, exuding from his lips. A mother ought never to go to sleep until her child has finished nursing.

The following are a few rules to prevent an infant from being accidentally overlaid: Let your baby, while asleep, have plenty of room in the bed. Do not allow him to be too near to you; or if unavoidably near you (from the small size of the bed), let his face be turned to the opposite side. Let him lie fairly either on his side or on his back. Be careful to ascertain that his mouth is not covered with the bedclothes; and do not smother his face with clothes, as a plentiful supply of pure air is as necessary when he is asleep as when he is awake. Never let him lie low in the bed. Let there be *no* pillow near the one his head is resting on, lest he roll to it, and thus bury his head in it. Remember, a young child has neither the strength nor the sense to get out of danger; and if he turns on his face, or buries his head in a pillow that is near, the chances are that he will be suffocated, more especially as these accidents usually occur at night, when the mother, or the nurse, is fast asleep. Never intrust him at night to a young and thoughtless servant.

A mother ought daily to satisfy herself as to the state of the bladder and the bowels of her child. She herself should inspect the motions, and see that they are of a proper color (bright yellow, inclining to orange) and consistence (that of thick gruel), that they are neither slimy, nor curdled, nor green; if they should be either the one or the other, it is a proof that she has, in all probability, been imprudent in her diet, and that it will be

necessary for the future that she be more careful both in what she eats and in what she drinks.

She ought to satisfy herself that the urine does not smell strongly, that it does not stain the diapers, and that the child makes a sufficient quantity.

A babe of three months and upward, ought to be held out at least a dozen times during the twenty-four hours; if such a plan were adopted, diapers might at the end of three months be dispensed with—a great *desideratum*—and he would be inducted into clean habits—a blessing to himself, a comfort to all around, and a great saving of dresses and of furniture. Teach your children to be clean. A dirty child is the mother's disgrace. Truer words were never written—A DIRTY CHILD IS THE MOTHER'S DISGRACE.

There are many SLIGHT ailments which are not of sufficient importance to demand the assistance of a doctor. I consider it well to make the distinction between *serious* and *slight* ailments; I am addressing a mother. With regard to serious ailments, I do not think myself justified, except in certain *urgent* cases, in instructing a parent to deal with them. It might be well to make a mother acquainted with the *symptoms*, but not with the *treatment*, in order that she might lose no time in calling in medical aid. *Serious* diseases, *with a few exceptions*, ought never to be treated by a parent, not even in the *early* stages, for it is in the early stages that the most good can generally be done.

It is utterly impossible for any one who is not trained to the medical profession to understand a *serious* disease in all its bearings, and thereby to treat it satisfactorily.

There are some exceptions to these remarks. It will be seen in future, that a mother ought to be made acquainted with the *treatment* of *some* of the more *serious* diseases, where delay in obtaining *immediate* medical assistance might be death. The diseases of infants, such as may be treated by a parent, are the following: Chafings, convulsions, costiveness, flatulence, gripings, hiccough, looseness of the bowels (diarrhœa), dysentery, nettle-rash, red-gum, stuffing of the nose, sickness and thrush. In all these complaints I will state *what to do* and *what* NOT *to do*.

Chafing.—The want of water, inattention, and want of cleanliness are the usual causes of chafing.

What to do.—The chafed parts ought to be well and thoroughly sponged with tepid *rain* water—allowing the water from a well-filled sponge to stream over them—and, afterward, they should be thoroughly, but tenderly dried with a soft towel, and then be dusted, either with finely-powdered starch, made of wheat flour, lycopodium, or with finely-powdered native carbonate of zinc, or they should be bathed with finely-powdered Fuller's-earth and tepid water.

If, in a few days, the parts are not healed, discontinue the above treatment, and use the following application: Beat up well together the whites of

two eggs, then add, drop by drop, two tablespoonfuls of brandy. When well mixed, put it into a bottle and cork it up. Before using it bathe the excoriated parts gently with lukewarm rain water, and tenderly dry them with a soft napkin, then, by means of a camel's hair brush, having first shaken the bottle, apply the above liniment. But bear in mind, after all that can be said and done, *there is nothing in these cases like water*—there is nothing like keeping the parts clean, and the only way of *thoroughly* effecting this object is *by putting the child every morning into his tub.*

What NOT *to do.*—Do not apply white lead, as it is a poison. Do not be afraid of using *plenty* of water, as cleanliness is one of the most important items of the treatment.

Convulsions are caused by stuffing the child in the early months of existence, *with food;* constant physicking by the mother; teething and whooping-cough, when attacking a very young baby. I never knew a case of convulsions to occur—say for the first four months—(except in very young infants laboring under whooping-cough), where children lived on the breast milk alone, and where they were not frequently quacked by their mother. For the treatment of the convulsions from teething, see page 309.

What to do in a case of convulsions which has been caused by feeding an infant too much, or with *artificial* food. Give him, every ten minutes, a teaspoonful of wine of ipecac, until free vomiting

is excited, then put him into a warm bath (see Warm Baths); and when he comes out of it administer an enema of warm soft water.

What NOT *to do.*—Do not, for at least a month after the fit, give him artificial food, but keep him entirely to the breast.

In case of convulsions from whooping-cough, there is nothing better than dashing cold water on the face, and immersing him in a warm bath of 98 degrees Fahr. If the spasms are caused by dentition, let the gums be freely and frequently lanced. Convulsions seldom occur in whooping-cough, unless the child is either very young or exceedingly delicate. Convulsions attending an attack of whooping-cough make it a *serious* complication, and require the assiduous and skilful attention of a judicious physician.

What NOT *to do in such a case.*—Do not apply leeches; the babe requires additional strength, not to be robbed of it; and do not attempt to treat the case yourself.

Constipation.—I strongly object to the frequent administration of cathartics, as the repetition of it increases the mischief to a tenfold degree.

What to do.—If a babe, after the first few months, were held out, and at regular intervals were put upon the chair, costiveness would not so much prevail. It is wonderful how soon the bowels by this simple plan, may be brought into a regular state. Besides, it inducts an infant into clean habits. I know many careful mothers who have

accustomed their children, after the first three months, to do without diapers altogether. It causes at first a little trouble, but that trouble is amply repaid by the good consequences that ensue. Diapers frequently chafe, irritate, and gall the tender skin of a baby. But they cannot be dispensed with, unless a mother has great judgment, sense, tact, and perseverance, to bring her little charge into the habit of relieving his bowels and bladder every time he is put upon his chair.

Before giving an infant a particle of laxative medicine, try the effect of a little *raw* sugar and water, either half a teaspoonful of raw sugar dissolved in a teaspoonful or two of water, or give him half a teaspoonful of raw sugar to eat. I mean by *raw* sugar, not the white, but the pure and unadulterated sugar, which can be procured from any reliable grocer. If you are wise, you will defer as long as you can giving an aperient. If you once begin, and continue it for a while, laxative medicine becomes a dire necessity, and then woe betide the poor unfortunate child. Or, give a third of a teaspoonful of honey, early in the morning, occasionally.

If an infant's bowels are habitually costive, try the effects of a warm water enema. Let three or four, or even more tablespoonfuls (according to the age of the infant) of warm water be administered. If the first enema does not have the desired effect, let a second, a third, or even more, be used, as no harm can possibly arise from so simple

a remedy. The effect of an enema is simply to wash out the bowels—to remove any offending motion pent up therein, and it does not at all interfere either with the appetite, with the digestion, or with increasing the obstinacy of the bowels, as a repetition of cathartics assuredly will do. An enema gives no pain, can never do any harm, and is administered in a few seconds. Truly, a warm water enema is a splendid remedy for opening a child's costive bowels.

Drinking a dessertspoonful or a tablespoonful of cold water the moment a babe awakes in the morning, and every morning of his life, increasing the quantity as he grows older, is another admirable remedy for relaxing costive bowels. The warm water enema and the drinking of cold water in the morning, are both simple remedies, and can never do harm, which is more than can be said of the nauseous and powerful drugs that are sometimes poured down poor unfortunate children's throats!

What to do.—There are two preparations of mercury I wish to warn you against administering of your own accord, viz.: Calomel, and a milder preparation called Grey powder (mercury with chalk). It is a common practice to give calomel, on account of the readiness with which it can be administered, it being small in quantity, and nearly tasteless. Grey powder is, with many mothers, a favorite in the nursery. It is a medicine of immense power—either for good or for evil; in

certain cases it is very valuable; but in others, and in the great majority, it is very detrimental. This practice of giving mercury, whether in the form either of calomel or grey powder, cannot be too strongly reprobated, as the frequent administration of either weakens the body, predisposes it to cold, and frequently excites scrofula. Calomel and grey powder ought never to be administered unless ordered by a doctor. Syrup of buckthorn and jalap are also frequently given, but they are griping medicines, and ought to be banished from the nursery.

Let me again urge the importance of your avoiding, as much as possible, all purgative medicines. They irritate beyond measure the tender bowels of an infant, and only make him more costive afterward; they interfere with his digestion, and are liable to give him cold. A mother who is always quacking her child with physic, is laying up for her unfortunate offspring a debilitated constitution—a miserable existence.

Great care should be paid to the rules of health, such as attention to diet, exercise in the open air, thorough bathing of the *whole* body; the regular habit of causing him, at stated periods, to be held out that he may solicit a stool. If these rules were observed, costiveness would not so frequently prevail, and one of the miseries of the nursery would be done away with.

Some mothers are frequently dosing their poor unfortunate babes either with magnesia to cool

them, or with castor oil to heal their bowels. Oh, the folly of such practices! The frequent repetition of magnesia, instead of cooling an infant, makes him feverish and irritable. The constant administration of castor oil, instead of healing the bowels, wounds them beyond measure. No! it would be a blessed thing if a babe could be brought up without giving him a particle of any cathartic; his bowels would then act naturally and well; but a mother must be particular in attending to Nature's medicines—to fresh air, to exercise, to diet, to thorough ablution, etc. Until that time comes, poor unfortunate babies must be occasionally dosed with an aperient.

Flatulence most frequently occurs in those infants who live on *artificial* food, especially if they are over-fed. I therefore beg to refer you to the precautions I have given, when speaking of the importance of keeping a child for the first five or six months *entirely* to the breast, and, if that is not practicable, of the times of feeding, and of the *best* kinds of artificial food, and of those which are least likely to cause wind.

What to do.—Notwithstanding these precautions, if the babe should still suffer, "one of the best and safest remedies for flatulence is Sal-volatile—a teaspoonful of a solution of one dram to three ounces of water." Or, a little dill or aniseed may be added to the food—half a teaspoonful of dill water. Or, take twelve drops of oil of dill, and two lumps of sugar; rub them well in a mortar together; then

add, drop by drop, three tablespoonfuls of spring water; let it be preserved in a bottle for use. A teaspoonful of this, first shaking the vial, may be added to each quantity of food. Or, three teaspoonfuls of bruised caraway seeds may be boiled for ten minutes in a teacupful of water, and then strained. One or two teaspoonfuls of the caraway tea may be added to each quantity of his food, or a dose of rhubarb and magnesia may occasionally be given.

Opodeldoc, or warm olive oil, well rubbed, for a quarter of an hour at a time, by means of the warm hand, over the bowels, will frequently give relief. Turning the child over on his bowels, so that they may press on the nurse's lap, will often afford great comfort. A warm bath generally gives *immediate* ease in flatulence; it acts as a fomentation to the bowels. But after all, a little mild aperient medicine, when the babe is suffering severely, is often the best remedy for wind.

Remember, that whenever it is possible, prevention is better than cure.

What NOT *to do.*—Cordials are sometimes given in flatulence; but as most of these quack medicines contain, in one form or another, either opium or poppy, and both are dangerous remedies for children, they must be banished from the nursery.

Syrup of poppies is another remedy which is often given by a nurse to afford relief for flatulence; but let me urge upon you the importance of banishing it from the nursery. It has caused the un-

timely end of thousands of children. The medical journals and the newspapers teem with cases of deaths from mothers incautiously giving syrup of poppies to ease pain and to procure sleep.

What are the symptoms, the causes and the treatment of gripings of an infant?—The symptoms: The child draws up his legs; screams violently; if put to the nipple to comfort him, he turns away from it and cries bitterly; he strains, as though he were having a stool; if he has a motion, it will be slimy, curdled, and perhaps green. If, in addition to the above symptoms, he passes a large quantity of watery fluid from his bowels, the case becomes one of *watery gripes*, and requires the immediate attention of a doctor.

The *causes* of gripings or gripes may proceed either from the infant or from the mother. If from the child, it is generally owing either to improper food or to over-feeding; if from the mother it may be traced to her having taken either greens, pork, tart beer, sour porter, pickles, or drastic purgatives.

What to do.—The *treatment*, of course, must depend upon the cause. If it arises from over-feeding, I would advise giving a small quantity of castor oil, warm fomentations to be applied to the bowels, and the mother, or the nurse, to be more careful for the future. If it proceeds from improper food, a dose or two of magnesia and rhubarb in a little dill water, made palatable with simple syrup.

Powdered Turkey Rhubarb, half a scruple ;
Carbonate of Magnesia, one scruple ;
Simple Syrup, three drams ;
Dill Water, eight drams.

Make a mixture.—One or two teaspoonfuls (according to the age of the child) to be taken every four hours, until relief is obtained—first shaking the bottle.

If it arises from a mother's imprudence in eating trash, or taking violent medicine, a warm bath usually affords instant relief.

Another excellent remedy is the hot compress. Soak a piece of new flannel, folded into two or three thicknesses, in warm water; wring it tolerably dry, and apply as hot as the child can comfortably bear it to the bowels, then wrap him in a warm, dry blanket, and keep him, for at least half an hour, enveloped in it. Under the above treatment he will generally soon fall into a sweet sleep, and awake quite refreshed.

What NOT *to do.*—Do not give opiates, astringents, chalk, or any quack medicine whatever.

If a child suffers from a mother's folly in her eating improper food, it will be cruel in the extreme for him a *second* time to be tormented from the same cause.

Hiccough is of such a trifling nature as hardly to require interference. It may generally be traced to over-feeding. Should it be severe, four or five grains of calcined magnesia, with a little syrup and aniseed water, and attention to feeding, are all that will be necessary.

Infantile diarrhœa, or cholera infantum, is one of

the most frequent and serious of infantile diseases, and carries off more children than any other complaint whatever; a knowledge of the symptoms, therefore, is quite necessary to a mother, in order that she may, at the proper time, call in efficient medical aid.

Before describing the symptoms, it may be well to state that a child should have from three to six motions in twenty-four hours; they ought to have a faint and peculiar, but not a strong and disagreeable odor. If there is a strong and disagreeable smell, the child is not well, and the case should be investigated, more especially if there were either curds or lumps in the motions; these latter symptoms denote that the food has not been properly digested.

If the infant, instead of having from three to six motions, should have more than double the latter number, if they are more watery, if they become slimy and green, or green in part and curdled, if they have an unpleasant smell, if he is sick, cross, restless, and fidgety, if every time he has a motion he is griped and in pain, I should say that he is troubled with diarrhœa, and it will be necessary to give a little medicine, which I will indicate in a subsequent paragraph.

Should there be both blood and slime mixed with the stool, the case becomes more serious; still, with proper care, relief can generally be quickly obtained. If the evacuations—instead of being stool—are merely blood and slime, and the child

strains frequently and violently, endeavoring thus to relieve himself, crying at each effort, the case assumes the character of dysentery.*

If there is a mixture of blood, slime and stool from the bowels, the case would be called dysenteric-diarrhœa. The latter case requires great skill and judgment on the part of a doctor, and great attention and implicit obedience from the mother and the nurse. I merely mention these diseases in order to warn you of their importance, and of the necessity of strictly attending to a doctor's orders.

Diarrhœa.—The causes of Diarrhœa are improper food, over-feeding, teething, cold, the mother's milk from various causes disagreeing, namely, from her being out of health, eating unsuitable food, taking improper and drastic purgatives, or nursing her child when she is pregnant. Of course, if any of these causes are in operation, they ought to be remedied, or medicine to the babe will be of little avail.

What to do.—If the case is *slight*, and has lasted two or three days, do not interfere by giving medicine at first; if the cause is some acidity or vitiated stool that should be eliminated, the best treatment is to assist nature by giving either a dose of castor oil, or a moderate one of rhubarb and magnesia,† and thus to work off the enemy.

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*See Symptoms and Treatment of Dysentery.

†For a rhubarb and magnesia mixture prescription, see page 333.

If the relaxation continues for three or four days —then the following mixture should be given :

Take of—Aromatic Powder of Chalk and Opium, ten grains;
Oil of Dill, five drops;
Simple Syrup, three drams;
Water, nine drams.

Half a teaspoonful to be given to an infant of six months and under, and one teaspoonful to a child above that age, every four hours —first shaking the bottle.

If the babe is at the breast, he ought to be kept *entirely* to it for a few days. The mother should be most particular in her own diet.

What NOT *to do.*—The mother must neither take greens, cabbage, raw fruit, pastry nor beer. The child, if at the breast, ought *not*, as long as the diarrhœa continues, to have any artificial food. He must neither be dosed with Grey powder, nor with Godfrey's Cordial or any other quack medicines.

Dysentery frequently arises from a neglected diarrhœa. It is more dangerous than diarrhœa, as it is of an inflammatory character ; and as it frequently attacks a delicate child, requires skillful handling.

Symptoms.—The infant, in all probability, has had an attack of diarrhœa—bowel complaint as it is called—for several days, having a dozen or two of motions, many of them slimy and frothy, like frog spawn, during the twenty-four hours. Suddenly the character of the motion changes,—from being principally stool, it becomes almost entirely blood and mucus ; he is dreadfully griped, which

causes him to strain violently, as though his inside would come away every time he has a motion,—screaming and twisting about, evidently being in the greatest pain, drawing his legs up to his belly and writhing in agony, Sickness and vomiting are always present, which still more robs him of his little remaining strength, and prevents the repair of his system. His face is the very picture of distress. If he has been a plump, healthy little fellow, you will see his face, in a few days, become old-looking, careworn, haggard, and pinched. Day and night the enemy tracks him; no sleep, or if he sleeps, he is, every few minutes, aroused. It is heartrending to have to attend to a bad case of dysentery in a child,—the writhing, the screaming, the frequent vomiting, the pitiful looks, the rapid wasting and exhaustion, make it more distressing to witness than almost any other disease a doctor attends.

What to do.—If the child is at the breast, keep him to it, and let him have nothing else, for dysentery is frequently caused by improper feeding. If your milk is not good, or is scanty, *instantly* procure a healthy wet nurse. *Lose not a moment*, for in dysentery moments are precious. If you have no milk, and no wet nurse can be procured, feed him entirely on artificial human milk or cow's milk—the milk of *one* healthy cow. Let the milk be unboiled, and fresh from the cow. Give it in small quantities at a time, and frequently, so that it may be retained on the stomach. If a

tablespoonful of the milk makes him sick, give him a dessertspoonful ; if a dessertspoonful causes sickness, let him only have a teaspoonful at a time, and let it be repeated every quarter of an hour. But remember, in such a case the breast milk is incomparably superior to any other milk, or to any other food whatever.

If he is a year old, and weaned, then feed him, as above recommended, on the cow's milk. If there is extreme exhaustion and debility, let fifteen drops of brandy be added to each tablespoonful of new milk, and let it be given every half hour.

A warm bath, at the commencement of the disease, is very efficacious; but it must be given at the *commencement*. If he has had dysentery for a day or two, he will be too weak to have a warm bath; then, instead of the bath—wrap him in a blanket, which has been previously wrung out of hot water; over which envelope him in a *dry* blanket. Keep him in this hot, damp blanket for half an hour; then take him out, put on his night-gown and place him in bed. If it is winter the bed should be previously warmed. The above blanket treatment will frequently give great relief, and sometimes cause him to fall into a sweet sleep. A flannel bag filled with hot powdered table salt, made hot in the oven, applied to the bowels, will afford much comfort.

Now with regard to medicine. I approach this part of the treatment with some degree of reluctance—for dysentery is a case requiring opium—

and opium I never like a mother of her own accord to administer. But if a doctor cannot be procured in time, the mother must then prescribe, or the child will die! *What then is to be done?* In severe dysentery, especially where there is sickness, there is no remedy equal to pure calomel, in a full dose without opium. Therefore, at the very *onset* of the disease, let from three to five grains (according to the age of the patient), of calomel, mixed with an equal quantity of powdered white sugar, be put dry on the tongue. In three hours after let the following mixture be administered:

Take of—Compound Powder of Ipecac, five grains;
Wine of Ipecac, one dram;
Simple Syrup, three drams;
Cinnamon Water, nine drams.

To make a mixture.—A teaspoonful to be given every three or four hours, first well shaking the bottle.

Supposing he cannot retain the mixture—the stomach rejecting it as soon as swallowed—what then? Give the opium, mixed with small doses of mercury with chalk and sugar, in the form of powder, and put one of the powders *dry* on the tongue, every three hours:

Take of—Powdered Opium, half a grain;
Mercury with Chalk, nine grains;
Sugar of Milk, twenty-four grains;

Mix well in a mortar, and divide into twelve powders.

If the dysentery has for several days persisted, and during that time nothing but mucus and blood has come from the bowels, then a combination of

castor oil and opium ought, instead of the medicine recommended above, to be given:

Take of—Mucilage of Gum Acacia, three drams;
Simple Syrup, three drams;
Tincture of Opium, ten drops (not minims);
Castor Oil, two drams
Cinnamon Water, four drams;

Make a mixture.—A teaspoonful to be taken every four hours, first well shaking the bottle.

What NOT *to do.*—Do not give carthartics, unless as before advised, the castor oil guarded with the opium; do not stuff him with artificial food; do not fail to send for a judicious and an experienced physician; for remember, that it requires a skilful doctor to treat a case of dysentery, more especially in a child.

Hives or nettle rash consists of several irregular, raised wheals, red at the base, and white on the summit, on different parts of the body; *but it seldom attacks the face.* It is not contagious, and it may occur at all ages and many times. It comes and goes, remaining only a short time in a place. It puts on very much the appearance of the child having been stung by nettles—hence its name. It produces great heat, itching, and irritation, sometimes to such a degree as to make him feverish, sick, and fretful. He is generally worse when he is warm in bed, or when the surface of his body is suddenly exposed to the air. Rubbing the skin, too, always aggravates the itching and the tingling, and brings out a fresh crop. The *cause* may commonly be traced to improper feeding; although, occasionally, it proceeds from teething.

What to do.—It is a complaint of no danger, and readily gives way to a mild aperient, and to attention to diet. There is nothing better to relieve the irritation of the skin than a warm bath, or frequently dusting the rash with toasted rye flour.

What NOT *to do.*—Do not apply cold applications to his skin, and do not wash (while the rash is out) in quite *cold* water. Do not allow him to be in a draught, but let him be in a well ventilated room. If he is old enough to eat meat, keep it from him for a few days, and let him live on milk and farinaceous diet. Avoid strong purgatives, and calomel, and grey powder.

Red-gum, tooth-rash, red-gown, is usually owing to irritation from teething; not always from the cutting, but from the evolution of the teeth. It is sometimes owing to unhealthy stools irritating the bowels, and showing itself, by sympathy, on the skin. Red-gum consists of several small pimples, about the size of pins' heads, and may be known from measles—the only disease for which it is at all likely to be mistaken—by its being unattended by symptoms of cold, such as sneezing, running, and redness of the eyes, etc.; and by the patches *not* assuming a crescentic—half-moon shape; red-gum may readily be known by the child's health being unaffected; unless, indeed, there is a great crop of pimples; then there will be slight feverishness.

What to do.—Little need be done. If there is a good deal of irritation, a mild aperient should be

given. The child ought to be kept moderately, but not very warm.

What NOT *to do.*—Draughts of air, or cold should be carefully avoided; as, by sending the eruption suddenly in, either convulsions or disordered bowels might be produced. Do not dose him with grey powder.

Stuffiness of the nose in a new-born babe may be prevented by rubbing a little tallow on the bridge of the nose. This is the old-fashioned remedy, and answers the purpose. It ought to be applied every evening just before putting him to bed. If the stuffing is severe, dip a sponge in hot water, as hot as he can comfortably bear; ascertain that it is not too hot, by previously applying it to your own face and then put it for a few minutes to the bridge of his nose. As soon as the hard mucus is within reach, it should be carefully removed.

Many thriving babies are, after taking the breast, frequently sick; still we cannot look upon sickness otherwise than as an index of either a disordered or of an overloaded stomach. If the child is sick, and yet thriving, it is a proof that he overloads his stomach. The mother must not allow him to nurse so much at a time. She should, until he retains all he takes, lessen the quantity of milk. If he is sick and does not thrive, the mother should notice if the milk he throws up has a sour smell; if it has, she must look to her own health; she ought to ascertain if her own stomach is out of order; for if such is the case, it is impossible for

her to make good milk. She should observe whether in the morning her tongue is furred and dry; whether she has a disagreeable taste in her mouth, or pains in her stomach, or heartburn, or flatulence. If she has all, or any of these symptoms, they explain why he is sick and does not thrive.

But if the mother is in the enjoyment of good health, she must then look to the babe himself, and ascertain if he is cutting his teeth, if the gums require lancing, if the secretions from the bowels are proper both in quantity and in quality, and, if he has had *artificial* food—whether it agrees with him.

What to do.—In the first place, if the gums are red, hot and swollen, let them be lanced; in the second, if the secretions from the bowels are either unhealthy or scanty, then give a dose of aperient medicine, such as castor oil, or the following: Take two or three grains of powdered Turkish rhubarb, three grains of pure carbonate of magnesia and one grain of aromatic powder—mix. The powder to be taken at bedtime, mixed in a teaspoonful of sugar and water, and it should, if necessary, be repeated the following night. In the third place, if the food he is taking does not agree with him, change it; or, if possible, keep him entirely to the breast.

What NOT *to do.*—Do not let him overload his stomach either with breast milk, or *with artificial* food. Let the mother avoid greens, cabbage, and all green vegetables.

The thrush is a frequent disease in infancy, and is often brought on either by stuffing or by giving improper food. A child brought up *entirely*, for the first three or four months, on the breast, seldom suffers from this complaint. The thrush consists of several irregular, roundish, white specks on the lips, the tongue, the inside, and the angles of the mouth, giving the parts affected the appearance of curds and whey having been smeared upon them. The mouth is hot and painful, and he is afraid to nurse; the moment the nipple is put in his mouth he begins to cry. The thrush sometimes, though rarely, runs through the whole of the alimentary canal. It should be borne in mind that nearly every child, who is nursing, has his or her tongue white or frosted, as it is sometimes called. The thrush may be mild or very severe.

What to do.—As the thrush is generally owing to improper and to artificial feeding, *if the child is at the breast*, keep him, for a time, entirely to it. Do not let him be always nursing, as that will not only fret his mouth, but will irritate and make sore the mother's nipple.

If he is not at the breast, but has been weaned, then keep him for a few days entirely to a milk diet—to the milk of ONE cow—either boiled, if it is hot weather, to keep it sweet, or unboiled in cool weather—fresh as it comes from the cow, mixed with lime water in the proportion of two parts of milk to one of lime water.

The best medicine is the old-fashioned one of

borax, a combination of powdered lump sugar and borax being a good one for the purpose; the powdered loaf sugar increases the efficacy and the cleansing properties of the borax; it tends, also, to make it more palatable:

Take of—Borax, half a dram;
Loaf Sugar, two scruples;
To be well mixed together, and made into twelve powders. One of the powders to be put dry on the tongue every four hours.

The best *local* remedy is honey and borax, which ought to be smeared frequently, by means of the finger, on the parts affected. Thorough ventilation of the apartments must be observed; and great cleanliness of the vessels containing the milk should be insisted upon. In a bad case of thrush, change of air to the country is most desirable; the effect is sometimes truly magical. If the thrush is brought on either by too much or by improper food, the mother must lessen the quantity and be more careful in her selection.

What NOT *to do.*—Do not mind the trouble of ascertaining that the cooking vessels connected with the baby's food are perfectly clean and sweet. Do not leave the purity and the goodness of the cow's milk to be judged either by the milkman or by the nurse, but take and prove it yourself. Do not keep the milk in a warm place, but in the dairy or the cellar; and if it is summer time, let the jug holding the milk be put in a crock containing lumps of ice. Do not use milk that has been drawn longer than twelve hours, but, if practi-

cable, have it direct from the cow, and use *immediately*—let it be really and truly fresh and genuine milk.

In a *severe* case of thrush, where the complaint has been brought on by *artificial* feeding, it is really surprising how rapidly a wet nurse will effect a cure, when all other means have been tried and have failed. The effect has been truly magical. In a severe case of thrush, pure air and thorough ventilation are essential to recovery.

A babe can only express his wants and his necessities by a cry; he can only tell his aches and his pains by a cry; it is the only language of babyhood; it is the most ancient of all languages; it is the language known by our earliest progenitors; it is, if listened to aright, a very expressive language, although it is but the language of a cry.

There is a language in the cry of an infant, which to a mother is the most interesting of all languages, and which a thoughtful physician can well interpret. The cry of a child, to an experienced doctor, is, each and all, a distinct sound, and is as expressive as the notes of the gamut. The cry of passion, for instance, is a furious cry; the cry of sleepiness is a drowsy cry; the cry of grief is a sobbing cry; the cry of an infant when roused from sleep is a shrill cry; the cry of hunger is very characteristic—it is unaccompanied with tears, and is a wailing cry; the cry of teething is a fretful cry; the cry of pain tells to a practiced ear the part of pain; the cry of earache

is short, sharp, piercing, and decisive, the head being moved about from side to side, and the little hand being often put up to the affected side of the head; the cry of bowel-ache is also expressive—it is not so piercing as from earache, and is an interrupted, straining cry, accompanied with a drawing-up of the legs to the belly; the cry of bronchitis is a gruff and phlegmatic cry; the cry of inflammation of the lungs is more a moan than a cry; the cry of croup is hoarse, and rough, and ringing, and is so characteristic that it may truly be called the croupy cry; the cry of inflammation of the membranes of the brain is a piercing shriek —a danger signal—most painful to hear; the cry of a child recovering from a severe illness is a cross, wayward, and tearful cry; he may truly be said to be in a quarrelsome mood; he bursts out, without rhyme or reason, into a passionate flood of tears—into a tempest of tears. Tears are always, in a severe illness, to be looked upon as a good omen, as a sign of amendment. Tears, when a child is dangerously ill, are very rarely, if ever, seen; a cry, at night, for light—a frequent cause of a babe's crying—is a restless cry.

Broth and beef tea will seldom agree with an infant at the breast, yet, when used as an enema, and in small quantities, so that they may be retained, I have frequently found them to be of great benefit; they have, in some instances, appeared to have snatched delicate children from the brink of the grave.

If a baby's ankles are weak, let them every morning be bathed, after the completion of his morning's ablution, for five minutes each time, with bay salt and water, a small handful of bay salt dissolved in a quart of rain water, then let them be dried; after drying the ankles rub well with the following liniment:

Take of—Oil of Rosemary, three drams;
Liniment of Camphor, thirteen drams;
To make a liniment.

Do not let him be put on his feet early; but allow him to crawl and sprawl and kick about the floor, until his body and ankles become strong.

Do not, on any account, without having competent advice on the subject, use iron instruments, or mechanical supports of any kind; the ankles are generally, by such artificial supports, made worse, in consequence of the pressure causing a further dwindling away and enfeebling of the ligaments of the ankles, already wasted and weakened.

Let him wear shoes with straps over the insteps to keep them on, and not boots; boots will only increase the weakness of the ankles.

Before concluding this chapter let me again urge upon you the importance—the paramount importance—if you wish your babe to be strong and hearty, of giving him as little physic as possible. The best physic for him is Nature's physic—fresh air and exercise and simplicity of living. A mother, who is herself always drugging her child, can only do good to two persons—the doctor and the druggist.

If an infant, from birth, is properly managed,—if he has an abundance of fresh air for his lungs, and plenty of exercise for his muscles,—if he has a good bathing and sousing of water for his skin,—if during the *early* months of his life, he has nothing but the mother's milk for his stomach,—he will require very little medicine—the less the better. He does not want his stomach to be made into a doctor's shop. The grand thing is not to take every opportunity of administering physic, but of using every means of withholding it; and if physic is necessary, not to doctor him yourself, unless in extreme and urgent cases, but to employ an experienced physician.

A babe who is always being physicked, is sure to be puny, delicate and unhealthy, and is ready at any moment to drop into an untimely grave.

I will maintain that a healthy child *never* requires drugging, and that constipation is brought on by bad management. Laxative medicines, to a healthy child, are so much poison. *Let me impress the above remarks on every mother's mind;* for it is a subject of vital importance. Never give a purgative to a healthy child; for if properly managed, he will never require one. If you once begin to give aperients, you will find difficulty in discontinuing them. Finally, I will only say with *Punch*,—"Don't."

Concluding remarks on infancy.—In concluding this part of my subject, I beg to remark, there are four things essentially necessary to a babe's well-

doing, namely, plenty of water for his skin; plenty of fresh genuine milk mixed with water for his stomach (giving him ONLY his mother's milk during the first six, eight, or nine months of his existence); plenty of pure air for his lungs. and plenty of sleep for his brain; these are the four grand essentials for an infant; without an abundance of one and all of them, perfect health is utterly impossible. Perfect health! the greatest earthly blessing, and more to be coveted than aught else beside. There is not a more charming sight in the universe than the beaming face of a perfectly healthy babe,—

"His are the joys of nature, his the smile,
The cherub smile, of innocence and health."

CHAPTER XIII.

CHILDREN AND THEIR DISEASES.

The Child is Father of the Man.—WORDSWORTH.

Ablution.—A child ought not to be bathed while he is in a state of perspiration, nor while he is perspiring *violently*, or the perspiration might be checked suddenly, and ill consequences would ensue; *nor ought he to be given a bath when he is cold*, or his blood would be chilled, and would be sent from the skin to some internal vital part, and thus would be likely to light up inflammation—probably of the lungs. His skin, when he is placed in his bath, ought to be moderately and comfortably warm, neither too hot nor too cold. When a child is a year old, if it is winter, a little warm water ought to be added, so as to raise the temperature to that of new milk. As the summer advances, less and less warm water is required, so that at length none is needed.

If a child is delicate, either a handful of table salt, or a half handful of bay salt, should be dissolved in a quart jug of *cold* water; then, just before taking the child out of his morning bath, let the above be poured over and down the back and loins of the child—holding the jug while pouring

its contents on the back, a foot distance from the child, in order that it may act as a kind of douche bath. The child, after he has been dried with the towel, ought to be well rubbed with the hand, as friction encourages the cutaneous circulation, and causes the skin to perform its functions properly, thus preventing the perspiration (which is one of the impurities of the body) from being sent inwardly either to the lungs or to other parts. The back, the chest, the bowels, and the limbs are the parts that ought to be well rubbed. One bath a day is quite sufficient, in the morning in preference to the evening, unless he is poorly, then evening instead of morning ; as, immediately after he has been washed and dried, he can be put to bed.

Clothing.—Children, boys and girls, especially if they are delicate, ought always to wear high dresses up to their neck. The exposure of the upper part of the chest (if the child is sickly) is dangerous. It is in the *upper* part of the lungs, in the region of the collar bones, that consumption first shows itself. The clothing of the child, especially about the chest, should be large and full in every part, and free from tight strings, so that the circulation of the blood may not be impeded, and that there may be plenty of room for the full development of the rapidly-growing body.

His frock, or tunic, ought to be of woolen material—warm, light and porous, in order that the perspiration may rapidly evaporate. The practice

of some mothers in allowing their children to wear tight bands around their waists, and tight clothes, is truly reprehensible. *Tight* bands or *tight* belts around the waist of a child, are very injurious to health; they compress the chest, and thus interfere with the rising and falling of the ribs—so essential to the breathing. *Tight* hats ought never to be worn; by interfering with the circulation they cause headaches. Nature delights in freedom, and resents interference!

The chest, bowels and feet should be kept comfortably warm. We must guard against an opposite extreme, and not keep them too hot. The head alone should be kept cool, on which account I do not approve either of night or of day caps. The best covering of the head is a loose fitting straw hat, which will allow the perspiration to escape. It should have a broad rim, to screen the eyes. A knitted or crocheted woolen hat, or a toboggan hood, makes a nice and comfortable winter covering for a child's head.

It is an abominable practice to cover a child's head either with beaver, felt, or any thick impervious material. It is a well ascertained fact that both beaver and silk hats cause men to suffer from headache, and to lose their hair—the reason being that the perspiration cannot possibly escape through them. Neither a child nor any one else should be permitted to be in the glare of the sun without his hat. When a child walks or is carried out in wintry weather, be sure and see that both

his hands and legs are well protected from the cold. There is nothing for this purpose like woolen gloves, and woolen stockings coming up over the knees.

I should not advise a child to be LIGHTLY clad, in order that he may be hardened thereby. Such a plan, instead of hardening, would be likely to produce a contrary effect. It is an ascertained fact that more children of the poor, who are thus lightly clad, die, than of those who are properly defended from the cold. Again, what holds good with a young plant is equally applicable to a young child; and we all know that it is ridiculous to think of unnecessarily exposing a tender plant to harden it. If it were thus exposed, it would wither and die.

If a child is delicate, if he has a cold body, a languid circulation, or predisposed to inflammation of the lungs, he should wear flannel instead of linen shirts. Flannel tends to keep the body at an equal temperature, thus obviating the effects of the sudden changes of the weather, and promotes by gentle friction the cutaneous circulation, thus warming the cold body, giving an impetus to the languid circulation, and preventing an undue quantity of blood from being sent to the lungs, either to light up or to feed inflammation. *Fine* flannel ought to be worn, which should be changed as frequently as the usual shirts.

If a child has had an attack either of bronchitis or of inflammation of the lungs, or if he has just

recovered from scarlet fever, by all means, if he has not previously worn flannel, *instantly* let him begin to do so, and let him wear a flannel waistcoat next the skin. *This is important advice, and ought not to be disregarded.*

During the winter he ought to wear woolen stockings that will reach *above* the knees, and *thick* drawers that will reach a few inches *below* the knees, as it is of the utmost importance to keep the lower extremities comfortably warm. It is really painful to see how many mothers expose the bare legs of their little ones to the frosty air, even in the depths of winter. Be sure and see that the boots and shoes of your child are sound and whole; for if they are not, they will let in the damp, and if the damp, disease and perhaps death. "If the poor would take better care of their children's feet, half the infantile mortality would disappear. It costs only a few cents to put a piece of thick felt or cork into the bottom of a boot or shoe, and the difference is often between that and a doctor's bill, with, perhaps, the undertaker's besides." Garters ought not to be worn, as they impede the circulation, waste the muscles, and interfere with walking. Stocking supporters are far better.

Let me urge the importance of not allowing your child to wear *tight* shoes; they cripple the feet, causing the joints of the toes, which ought to have free play, and which should assist in walking, to be, in a manner, useless; they produce corns

and bunions, and interfere with the proper circulation of the foot. A shoe ought to be made according to the shape of the foot—rights and lefts are therefore desirable. The toe part of the shoe must be made broad, so as to allow plenty of room for the toes to expand, and that one toe can not overlap another. Be sure that there is no pinching and no pressure. In the article of shoes you ought to be particular and liberal; pay attention to having nicely fitting ones, and let them be made of soft leather, and throw them aside the moment they are too small. It is poor economy, indeed, because a pair of shoes is not worn out, to run the risk of incurring the above evil consequences.

Shoes are far preferable to boots; boots weaken instead of strengthen the ankle. The ankle and instep require free play, and ought not to be hampered by boots. Boots, by undue pressure, decidedly waste away the ligaments of the ankle. Boots act on the ankles in a similar way that corsets do on the waist—they do mischief by pressure. Boots waste away the ligaments of the ankle; stays waste away the muscles of the back and chest; and thus, in both cases, do irreparable mischief. A mother ought not to leave off her children's winter clothing until the spring is far advanced; it is better to be on the safe side, and to allow the winter clothes to be worn until the end of May

Diet.—There is no objection when a child is

twelve months old, to his *occasionally* having a mealy, *mashed* potato and gravy, or a few crumbs of bread and gravy for dinner. Rice pudding or batter pudding may be given for a change, but remember, the food recommended in a former paragraph is what must be principally given, until he is eighteen months old. He ought not to have meat until he has several teeth to chew it with. If he has most of his teeth—which he very likely will have at this age—there is no objection to his taking a small slice of mutton, or roast beef, which should be well cut into very small pieces, and mixed with a mealy *mashed* potato, and a few crumbs of bread and gravy; either *every* day, if he is delicate, or every *other* day, if he is a gross or fast feeding child.

I think so highly of rice, suet, and batter puddings, and of other farinaceous puddings, that I should advise you to let him have one or the other, even on those days when he has meat—giving it to him *after* his meat. But remember, if he has meat *and* pudding, the meat ought to be given sparingly. A well boiled suet pudding, with plenty of suet in it, is one of the best puddings he can have; it is, in point of fact, meat and farinaceous food combined. The objection to fruit pies and puddings is, that the pastry is often too rich for the delicate stomach of a child; there is no objection to the fruit—cooked fruit being most wholesome; if fruit puddings and pies are eaten, the pastry part ought to be quite plain. *Jam*—

such as strawberry, raspberry, gooseberry—*is most wholesome for a child*, and ought occasionally to be given, in place of sugar, with rice, batter, or other puddings. Marmalade, too, is very wholesome.

Puddings ought to be given *after* and not *before* meat and vegetables; if you give him pudding before his meat, he might refuse to eat meat altogether. By adopting the plan of giving puddings *every* day, your child will require *less* animal food; *much* meat is injurious to a young child. But do not run in an opposite extreme; a *little* meat ought to be given every day, *providing he has cut the whole of his first set of teeth;* until then, meat every *other* day will be often enough.

As soon as a child has cut the whole of his first set of teeth, he can have nothing better than scalding hot new milk poured on sliced bread, with a slice or two of bread and butter to eat with it. Butter, in moderation, is nourishing, fattening, wholesome, and tends to keep the bowels regular. These facts should be borne in mind, as some mothers foolishly keep their children from butter, declaring it to be too rich for their children's stomachs. New milk should be used in preference to cream or skim milk. Cream, as a rule, is too rich for the delicate stomach of a child, and skim milk is too poor when robbed of the butter which the cream contains. But give cream and water, where new milk (as is *occasionally* the case) does not agree; but never give skim milk. *Skim*

milk, among other evils, produces costiveness, and necessitates the frequent administration of aperients. Cream, on the other hand, regulates and tends to open the bowels. When a child has costive bowels, there is nothing better for his breakfast than well-made and well-boiled oatmeal mush, which ought to be eaten with milk fresh from the cow. Scotch children scarcely take anything else, and a finer race do not exist; as to physic, many of them do not even know the taste or smell of it! You will find cow's milk is valuable, indeed, an indispensable article of diet for the young; it is most nourishing, wholesome and digestible. The finest and the healthiest children are those who, for the first four or five years of their lives, are fed *principally* upon it. No child can live and be healthy unless milk is the staple article of his diet. There is no substitute for milk. To prove the fattening and strengthening qualities of milk, look only at a young calf who lives on milk, and on milk alone. He is a Samson in strength, and is as fat as butter; and all young things, if they are in health, are fat.

Milk contains every ingredient to build up the body, which is more than can be said of any other known substance besides. A child may live entirely, and grow, and become both healthy and strong, on milk, and on milk alone, as it contains every constituent of the human body. A child cannot "live by bread alone," but he might on milk alone. Milk is animal and vegetable—it is meat

and bread—it is food and drink—it is a fluid, but as soon as it reaches the stomach, it becomes a solid—solid food; it is the most important and valuable article of diet for a child in existence. It is a glorious food for the young, and must never, on any account whatever, be dispensed with. *Young* children, as a rule, are allowed to eat too much meat. It is a mistaken notion of a mother that they require so much animal food. If more milk were given and less meat, they would be healthier, and would not be so predisposed to disease, especially to diseases of debility, and to skin disease.

I should strongly recommend you then, to be extravagant in your milk score. Each child ought, in the twenty-four hours, to take at least a quart of good, fresh, new milk. It should be given in various ways—as bread and milk, rice puddings, milk and different kinds of farinaceous food, mush and milk, plain milk, cold milk, hot milk, any way and every way, that will please his palate, and that will induce him to take an abundant supply of it. The advice I have just given you is of paramount importance, and demands your most earnest attention. There would be very few rickety children in the world if my counsel were followed out to the very letter.

But if a child will not take milk, having an aversion to it, then boil the milk, and sweeten it to suit his palate. After he has been accustomed to it for a while, he will then probably like milk.

Gradually reduce the sugar, until at length it is dispensed with. A child will often take milk this way, whereas he will not otherwise touch it. If a child will not drink milk, he *must* eat meat; it is absolutely necessary that he should have either one or the other, and, if he has cut nearly all his teeth, he ought to have both meat and milk—the former in moderation, the latter in abundance. Milk, either boiled or unboiled, almost always agrees with a child. If it does not, it must be looked upon as the exception, and not as the rule. I would, in such a case, advise one-eighth of lime water to be added to seven-eighths of new milk—that is, two tablespoonfuls of lime water should be mixed with half a pint of new milk.

The children of the rich suffer much more from costiveness than the children of the poor. The principal reason is that the children of the rich drink milk without water, while the children of the poor drink water without or with very little milk—milk being binding, and water laxative in its effect. Be sure, then, and bear in mind, *as this is most important advice*, to see that water is mixed with *all* the milk that is given to your child. The combination of milk and water for a child is a glorious compound—strengthening, fattening, refreshing and regulating to the bowels, and thus doing away with that disgraceful proceeding so common in nurseries, of everlasting physicking, irritating and irreparably injuring the tender bowels of a child. Cathartics, as a rule, are quite unnecessary, and should only be given in

severe illness, and under the direction of a judicious doctor. How much misery and injury might be averted if milk were always given to a child in combination with water!

Aperients, by repetition, unlike water, increase the mischief tenfold, and bind up the bowels most effectually. A mother, before she gives an aperient to her child should ponder well upon what I have said upon the subject, it being a vital question, affecting, as it does, the well-being and the well-doing of her child. If a child's bowels are very costive, do not give him a grain or a drop of laxative medicine, but administer an enema, a half teacup or teacupful, according to the age of the child,* of warm water; this will effectually open the bowels, without confining them afterward, which opening physic would most assuredly do.

If he wants anything to eat between breakfast and dinner let him have a piece of *dry* bread; and if he has eaten very heartily at dinner, and, like Oliver Twist, "asks for more," give him a piece of *dry* bread to satisfy his craving. He will never eat more of it than will do him good, and yet he will take sufficient to satisfy his hunger, which is very important. He should now have meat, either mutton or beef, for dinner, daily, which must be cut up very small, and should be mixed with mealy, *mashed* potato and gravy. He ought *always* to be

* For a babe, from birth until he is two years old, one, two or three tablespoonfuls of warm water will be sufficient.

accustomed to eat salt with his dinner. Let a mother see that this advice is followed, or evil consequences will inevitably ensue. Let him be closely watched, to ascertain that he well masticates his food, and that he does not eat too quickly, for young children are apt to bolt their food.

Pork is rich, gross, and therefore unwholesome food for the delicate stomach of a child. I have known it to produce violent pain, sickness, purging and convulsions. If a child is fed much upon such meat, it will be likely to produce pimples on the skin. In fine, his blood will put on the same character as the food he is fed with. Pork may be considered a *strong* meat, and "*strong* meat and *strong* drink can only be taken by *strong* men."

My objection to pork is that it is rich and gross; this does not apply to veal, but the objection to that is, that it is more difficult of digestion than either mutton or beef; indeed, all young meats are harder of digestion than meats of maturity; thus mutton is more digestible than lamb, and beef than veal. If beef is *much* salted it is hard of digestion, and therefore ought not to be given; but if *slightly* salted, there will be no objection to a little. Lightly boiled egg at any time makes an excellent change; there is great nourishment in an egg; it will not only strengthen the frame, but it will give animal heat as well. These two qualities are most valuable; indeed, essential for the due performance of health; many articles of food con-

tain the one qualification, but not the other; hence the egg is admirably suitable for a child's *occasional* dinner.

Occasionally, either asparagus, broccoli, cauliflower, turnips, or Lima beans may with advantage be given. Green peas may occasionally be given, providing they are thoroughly boiled and mashed with the knife on the plate. Underdone and unmashed peas are not fit for a child's stomach; there is nothing more difficult of digestion than underdone peas. It is important, too, to mash them, even if they are well done, as a child generally bolts peas whole; and they pass through the alimentary canal without being in the least digested.

I have recommended a great sameness in an *infant's* diet, but a *child's* meals, his dinners especially, ought to be much varied. For instance, do not let him have mutton day after day, but ring the changes on mutton, beef, poultry, game, and even occasionally fish—sole or cod.

Not only let there be a change of meat, but let there be a change in the manner of cooking it; let the meat sometimes be roasted, at the other times boiled. I have known a mother who prided herself as being experienced in these matters, feed her child, day after day, on mutton chops. Such a proceeding is most injurious to him, as after a while his unfortunate stomach will digest nothing but mutton chops, and in time, not even those.

With regard to vegetables, potatoes—*mashed*

potatoes—ought to be his staple vegetable, but every now and then, cauliflower, asparagus, turnips and Lima beans should be given. With respect to puddings, vary them, thus: Rice, one day; suet, another; batter, a third; tapioca, a fourth; or even occasionally, he might have apple, gooseberry or rhubarb pudding—providing the pastry is plain and light. It is an excellent plan, as I have before remarked, to let a child eat jam—such as strawberry, raspberry, or gooseberry—and that without stint, either with rice or with batter puddings. *Variety of diet is good for a child;* it will give him muscle, bone and sinew, and what is very important, it will tend to regulate his bowels, and thus prevent the necessity of giving him aperients.

But do not stuff a child—do not press him, as is the wont of some mothers, to eat more than he feels inclined. On the contrary, if you think that he is eating too much—that he is overloading his stomach—and he should ask for more, then, instead of giving him more meat or pudding, give him a piece of dry bread. By doing so, you may rest assured that he will not eat more than is absolutely good for him. If he cannot eat well, depend upon it, there is something wrong about the system.

Asking for something to eat, is frequently, in a severe illness, the first favorable symptom; we may generally then prognosticate that all will soon be well again. If a child refuses his food, neither coax nor tempt him to eat, as food without an ap-

petite will do him more harm than it will do him good; it may produce either sickness, bowel complaint, or fever. Depend upon it, there is always a cause for a want of appetite; perhaps his stomach has been overworked, and requires repose, or his bowels are loaded, and nature wishes to take time to use up the old material; there may be fever lurking in his system; nature stops the supplies, and thus endeavors, by not giving it food to work with, to nip it in the bud; there may be inflammation; food would then be improper, as it would only add fuel to the fire; let the cause be either an overworked stomach, overloaded bowels, fever, or inflammation, food would be injurious. Kind Nature, if we will but listen to her voice, will tell us when to eat, and when to refrain.

Some parents are in the habit of giving their children strong (and frequently green) tea. This practice is most hurtful. It acts injuriously upon their delicate nervous system, and thus weakens their whole frame. If milk does not agree, a cup of very weak tea, water with a dash of *black* tea in it, with a tablespoonful of cream, may be substituted for milk; but a mother must never give tea where milk agrees.

Cakes and sweetmeats are so much slow poison. Such things cloy and weaken the stomach, take away the appetite, and thus debilitate the frame. Sweetmeats are usually colored with poisonous pigments. A mother surely is not

aware, that when she is giving her child sugar confectionery she is, in many cases, administering a deadly poison to him?

A child's antipathy to certain articles of diet should be respected; it is a sin and a shame to force him to eat what he has a great dislike to; a child sometimes dislikes the fat of meat, underdone meat, the skin off boiled milk and off rice pudding. Why should he not have his likes and dislikes as well as "children of a larger growth"? Besides, there is an idiosyncrasy—a peculiarity of the constitution in some children—and nature oftentimes points out what is good and what is bad for them individually, and we are not to fly in the face of Nature. If a child is forced to eat what he dislikes, it will most likely disorder his stomach and bowels; food, if it is really to do him good, must be eaten by him with a relish, and not with disgust or aversion. Some mothers, who are strict disciplinarians, pride themselves on compelling their children to eat whatever they choose to give them. Such children are to be pitied!

A child ought to commence to dine with his parents as soon as he is old enough to sit up at the table, providing the father and mother dine or lunch in the middle of the day. I always prefer having children about me at mealtimes. I think it makes them little gentlemen and gentlewomen in a manner that nothing else will.

The nursery.—The nursery ought to be the largest and most airy room in the house. In town,

if it is in the top story (providing the apartment is large and airy) so much the better, as the air will then be purer. The architect, in the building of a house, ought to be particularly directed to pay attention to the space, the loftiness, the ventilation, the light, the warming, and the conveniences of a nursery. A bathroom attached to it will be of great importance and benefit to the health of a child.

It will be advantageous to have a water-closet near at hand, which should be well supplied with water, be well drained, and well ventilated. If this is not practicable, the evacuations ought to be removed as soon as they are passed. It is a filthy and an idle habit to allow a motion to remain for any length of time in a room.

The VENTILATION of a nursery is of paramount importance. There ought to be a constant supply of fresh pure air in the apartment. But how few nurseries have fresh, pure air? Many nurseries are nearly hermetically sealed—the windows are seldom if ever opened; the doors are religiously closed; and, in summer time, the chimneys are carefully stuffed up, so that a breath of air is not allowed to enter. The consequences are that the poor unfortunate children are poisoned by their own breaths, and are made so delicate that they are constantly catching cold; indeed, it may be said that they are laboring under chronic catarrhs, all arising from Nature's laws being set at defiance.

The windows ought to be large, and should be

made to freely open, both at top and bottom. Whenever the child is out of the nursery, the windows ought to be thrown wide open; indeed, when he is in it, if the weather is fine, the upper sash should be a little lowered. A child should be encouraged to leave the room frequently, in order that it may be freely ventilated; for good air is as necessary to his health as wholesome food, and air cannot be good if not frequently changed. If you wish to have a strong and healthy child, ponder over and follow this advice.

A nursery is usually kept too hot; the temperature in the winter ought *not to exceed* 60 degrees Fahrenheit. A *good* thermometer should be considered an indispensable requisite to a nursery. A child in a hot, close nursery is bathed in perspiration; if he leaves the room to go to one of lower temperature, the pores of his skin are suddenly closed, and either a severe cold, or an inflammation of the lungs, or an attack of bronchitis, is likely to ensue. More than this, the child is weakened and enervated by the heat, and readily falls a prey to disease.

A child ought never to be permitted to sit with his back to the fire; it weakens the spine, and thus the whole frame; it causes a rush of blood to the head and face, and predisposes him to colds. Pure air and pure water, and let me add, pure milk, are the grand and principal requirements of health for a child.

Look well to the DRAINAGE of your house and

neighborhood. A child is very susceptible to the influence of bad drainage. Bad drains are fruitful sources of scarlet fever, diphtheria, diarrhœa, etc.

A nursery floor ought not to be *washed* oftener than once a week; and then the child or children should be sent into another room until it is dry. During the drying of the floor, the windows must be thrown *wide* open.

The constant *wetting* of a nursery floor is a frequent source of illness among the children. The floor ought to be kept clean; but this may be done by thoroughly sweeping the room out every morning before the little charge makes his appearance.

Do not have your nursery wall covered with *green* paper hangings. Green paper hangings contain large quantities of arsenic—arsenite of copper—which is a virulent poison, and which flies about the room in the form of powder. There is frequently enough poison on the walls of a room to destroy a whole neighborhood. There is another great objection to having your nursery walls covered with *green* paper hangings; if any of the paper should become loose from the walls a little child is very apt to play with it, and to put it, as he does everything else, to his mouth. This is not an imaginary state of things, as four children in one family have just lost their lives from sucking green paper hangings. Children's toys are frequently painted a green color with arsenite of copper, and are consequently highly dangerous for them to play with.

The best toy for a child is a box of *unpainted* wooden bricks, which is a constant source of amusement to him.

Let a child's *home* be the happiest *house* to him in the world; and to be happy he must be merry and cheerful; and he ought to have an abundance of playthings, to help on the merriment. If he has a dismal nurse, and a dismal home, he may as well be incarcerated in a prison, and be attended by a jailor. It is sad enough to see dismal, doleful men and women, but it is a truly lamentable and unnatural sight to see a doleful child. The young ought to be as playful and as full of innocent mischief as kittens. There will be quite time enough in after years for sorrow and for sadness.

Bright colors, plenty of light, *clean* windows (mind this, if you please), an abundance of *good* colored prints, and toys without number, are the proper furnishings of a nursery. Nursery! why, the very name tells you what it ought to be—the home of childhood—the most important room in the house—a room that will greatly tend to stamp the character of your child for the remainder of his life. A placid, well-regulated temper is very conducive to health. A disordered, or an overloaded, stomach, is a frequent cause of peevishness. Appropriate treatment in such a case will, of course, be necessary.

I do not approve of a carpet in a nursery, unless it is a small piece for a child to roll upon. A carpet harbors dirt and dust, which dust is con-

stantly floating about the atmosphere, and thus making it impure for him to breathe. The truth of this may be easily ascertained by entering a darkened room, where a ray of sunshine is struggling through a crevice in the shutters. If the floor of a nursery must be covered, let a drugget be laid down; and this may, every morning, be taken up and shaken. The less furniture a nursery contains the better, for much furniture obstructs the free circulation of the air, and prevents a child from taking proper play and exercise in the room —an abundance of which are absolutely necessary for his health.

You cannot be too particular in the choice of those who are in constant attendance upon him. Yourself must be his *head nurse*—you only require some one to take the drudgery off your hands. You ought to be particularly careful in the selection of his nurse. She should be steady, lively, truthful, and good tempered; and must be free from any natural imperfection, such as squinting, stammering, etc., for a child is such an imitative creature that he is likely to acquire that defect, which in the nurse is natural. Children, like babies, are quick at taking notice. What they see they mark, and what they mark they are very prone to copy.

The nurse ought not to be very young, or she may be thoughtless, careless, and giggling. You have no right to set a child to mind a child; it would be like the blind leading the blind. No! a

child is too precious a treasure to be intrusted to the care and keeping of a young girl. Many a child has been ruined for life by a careless young nurse dropping him and injuring his spine.

Never should a nurse be allowed to wear a mask, nor to dress up and paint herself as a ghost, or as any other frightful object. A child is naturally timid and full of fears, and what would not make the slightest impression upon a grown up person might throw a child into fits. Never should she be permitted to tell her little charge frightful stories of ghosts and hobgoblins; if this is allowed, the child's disposition will become timid and wavering, and may continue so for the remainder of his life.

If a little fellow were not terrified by such stories, the darkness would not frighten him more than the light. The mind, thus filled with fear, acts upon the body, and injures the health. A child must never be placed in a dark cellar, nor frightened by tales of rats, etc. Instances are related of fear thus induced impairing the intellect for life, and there are numerous examples of sudden fright causing a dangerous and even fatal illness.

This frightening of a child by a silly nurse frequently brings on night-terrors. He wakes up suddenly, soon after going to sleep, frightened and terrified, screaming violently, and declaring that he has seen either some ghost, or thief, or some object that the silly nurse had been previously

describing, who is come for him to take him away. The little fellow is the very picture of terror and alarm; he hides his face in his mother's bosom, perspiration streams down him, and it is some time before he can be pacified—when, at length, he falls into a troubled, feverish slumber, to awake in the morning unrefreshed. Night after night these terrors harrass him, until his health materially suffers, and his young life becomes miserable, looking forward with dread to the approach of darkness.

Treatment of night terrors.—If they have been brought on by the folly of the nurse, discharge her at once, and be careful to select a more discreet one. When the child retires to rest, leave a candle burning, and let it burn all night; sit with him until he is asleep; and take care, in case he should rouse up in one of his night terrors, that either yourself or some kind person is near at hand. Do not scold him for being frightened--he cannot help it; but soothe him, calm him, fondle him, take him into your arms and let him feel that he has some one to rest upon, to defend and to protect him. It is frequently in these cases necessary, before he can be cured, to let him have change of air and change of scene. Let him live a great part of the day in the open air.

A nurse-maid should never be allowed to whip a child. "Does ever any man or woman remember the feeling of being 'whipped' as a child, the fierce anger, the insupportable ignominy, the longing for revenge, which blotted out all thought of contrition

for the fault, or rebellion against the punishment? With this recollection on their own parts, I can hardly suppose any parents venturing to inflict it, much less allowing its infliction by another under any circumstances whatever. A nurse-maid or domestic of any sort, once discovered to have lifted up her hand against a child, ought to meet instant rebuke, and on a repetition of the offense instant dismissal."

I have seen a lazy nurse sit before the fire in the winter time with a child on her lap, rubbing his cold feet just before putting him to bed. This is not the way to warm his feet. The right method is to let him romp and run either about the room or the hall—this will effectually warm them; but it will entail a little extra trouble on the nurse, as she will have to use a little exertion to induce him to do so, and this extra trouble a lazy nurse will not relish. Warming the feet before a fire will give the little fellow chilblains, and will make him when he is in bed more chilly. The only way for him to have a good romp before he goes to bed, is for the mother to join in the game. She may rest assured that if she does so, her child will not be the only one to benefit by it. She will find it of marvelous benefit to her own health; it will warm her own feet, it will be almost sure to insure her a good night, and will make her feel so light and buoyant as almost to fancy that she is a girl again. Let every child before going to bed, hold a high court of revelry; let him have an hour—the Chil-

dren's Hour—devoted to romp, to dance, to shout, to sing, to riot, and to play, and let him be the master of the revels—

> "Between the dark and the daylight,
> When the night is beginning to lower,
> Comes a pause in the day's occupation,
> Which is known as the Children's Hour."
>
> —*Longfellow.*

Let a child be employed—take an interest in his employment, let him fancy that he is useful—*and he is useful*—he is laying up a stock of health. He is much more usefully employed than many other grown up children are.

A child should be happy; he must, in every way, be made happy; everything ought to be done to conduce to his happiness, to give him joy, gladness and pleasure. Happy he should be, as happy as the day is long. Kindness should be lavished upon him. Make a child understand that you love him; prove it in your actions—these are better than words; look after his little pleasures—join in his little sports; let him never hear a morose word—it would rankle in his breast, take deep root, and in due time bring forth bitter fruit. Love! let love be his polar star; let it be the guide and the rule of all you do and all you say to him. Let your face, as well as your tongue, speak love. Let your hands be ever ready to minister to his pleasures and to his play. "Blessed be the hand that prepares a pleasure for a child, for there is no saying when and where it may again bloom forth.

Does not almost everybody remember some kind-hearted man who showed him a kindness in the dulcet days of childhood? The writer of this recollects himself, at this moment, a barefooted lad, standing at the wooden fence of a poor little garden in his native village, while, with longing eyes, he gazed on the flowers which were blooming there quietly in the brightness of the Sabbath morning. The possessor came from his little cottage. He was a wood-cutter by trade, and spent the whole week at work in the woods. He had come into the garden to gather flowers to stick in his coat when he went to church. He saw the boy, and breaking off the most beautiful of his carnations (it was streaked with red and white), he gave it to him. Neither the giver nor the receiver spoke a word, and with bounding steps the boy ran home. And now here, at a vast distance from that home, after so many events of so many years, the feeling of gratitude which agitated the breast of the boy, expresses itself on paper. The carnation has long since faded, but it now bloometh afresh."—*Douglas Jerrold.*

The hearty, ringing laugh of the child is sweet music to the ear. There are three most joyous sounds in nature—the hum of the bee, the purr of a cat, and the laugh of a child. They tell of peace, of happiness, and of contentment, and make one for a while forget that there is so much misery in the world.

A man who dislikes children is unnatural; he

has no milk of human kindness in him; he should be shunned. Give me, for a friend, a man—

> "Who takes the children on his knee,
> And winds their curls about his hand."
>
> —*Tennyson.*

A child's troubles are soon over—his tears are soon dried; "nothing dries sooner than a tear"—if not prolonged by improper management. Never allow a child to be teased; it spoils his temper. If he is in a cross humor take no notice of it, but divert his attention to some pleasing object. This may be done without spoiling him. Do not combat bad temper with bad temper—noise with noise. Be firm, be kind, be gentle, be loving, speak quietly, smile tenderly, and embrace him fondly, but *insist upon implicit obedience*, and you will have, with God's blessing, a happy child.

Speak *gently* to a child; speak *gently* to all; but more especially speak *gently* to a child. Pleasant words ought always to be spoken to a child; there must be neither snarling, nor snapping, nor snubbing, nor loud contention toward him. If there is it will ruin his temper and disposition, and will make him hard, harsh, morose and disagreeable.

Do not always be telling your child how wicked he is; what a naughty boy he is; that God will never love him, and all the rest of such twaddle and blatant inanity! Do not, in point of fact, bully him, as many poor little fellows are bullied. It will ruin him if you do; it will make him in after years, either a coward or a tyrant. Such conver-

sation, like constant droppings of water, will make an impression, and will cause him to feel that it is of no use to try to be good—that he is hopelessly wicked. Instead of such language, give him confidence in himself; rather find out his good points and dwell upon them; praise him where and whenever you can; and make him feel that, by perseverance and by God's blessing, he will make a good man. Speak truthfully to your child; if you once deceive him, he will not believe you for the future. Not only so, but if you are truthful yourself you are likely to make him truthful—like begets like. There is something beautiful in truth! A lying child is an abomination! Sir Walter Scott says "that he taught his son to ride, to shoot, and to tell the truth." Archdeacon Hare asserts "that Purity is the feminine, Truth the masculine of Honor"

As soon as a child can speak he should be made to lisp the noble words of truth, and to love it, and to abhor a lie. What a beautiful character he will then make.

Have no favorites, show no partiality; for the young are very jealous, sharp-sighted and quick-witted, and take a dislike to the petted one. Do not rouse the old Adam in them. Let children be taught to be "kindly affectionate one to another with brotherly love;" let them be encouraged to share each other's toys and playthings, and to banish selfishness.

Attend to a child's *little* pleasures. It is the *lit-*

tle pleasures of a child that constitute his happiness. Great pleasures come but seldom, and are the exception, and not the rule.

Let a child be nurtured in love, "It will be seen," says the author of *John Halifax*, "that I hold this law of kindness as the Alpha and Omega of education. I once asked one, in his own house, a father in everything but the name, his authority unquestioned, his least word held in reverence, his smallest wish obeyed—'How did you ever manage to bring up these children?' He said, '*By love*.'"

Let every word and action prove that you love your children. Enter into all their little pursuits and pleasures. Join them in their play, and be a child again. If they are curious, do not check their curiosity, but rather encourage it; for they have a great deal—as we all have—to learn, and how can they know if they are not taught? You may depend upon it the knowledge they obtain from observation is far superior to that obtained from books. Let all you teach them, let all you do, and let all you say, bear the stamp of love. "Endeavor, from first to last, in your intercourse with your children, to let it bear the impress of *love*. It is not enough that you *feel* affection toward your children—that you are devoted to their interests; you must show in your manner the fondness of your heart toward them. Young minds cannot appreciate great sacrifices made for them; they judge their parents by the words and

deeds of everyday life. They are won by *little* kindnesses, and alienated by *little* acts of neglect or impatience. One complaint unnoticed, one appeal unheeded, one lawful request arbitrarily refused, will be remembered by your little ones more than a thousand acts of the most devoted affection."

Exercise.—A child, during the summer months, should be sent out before breakfast when the weather will permit, and providing the wind is neither in an easterly nor in a northeasterly direction; indeed, *he can scarcely be too much in the open air.* He must not be allowed to stand about draughts or about entries, and the only way to prevent him doing so is for the mother herself to accompany him. She will then kill two birds with one stone, as she will, by doing so, benefit her own as well as her child's health.

A child ought not to be early put on his feet to walk; let him learn to walk himself. He ought to be put upon a carpet, and it will be found that when he is strong enough, he will hold by a chair and will stand alone. When he can do so, and attempts to walk, he should then be supported. You must, on first putting him upon his feet, be guided by his own wishes. He will have the inclination as soon as he is strong enough, to walk. When he has the inclination and strength it will be folly to restrain him; if he has neither the inclination nor the strength, it will be absurd to urge him on. Rely, therefore, to a certain extent,

upon the inclination of the child himself. Self-reliance cannot be too early taught him, and, indeed, every one else. In the generality of instances, however, a child is put on his feet too soon, and the bones at that tender age, being very flexible, bend, causing bowed and bandy-legs; and the knees, being weak, approximate too closely together, and thus they become knock-kneed. This advice I must strongly insist on, as many mothers are so ridiculously ambitious that their babies should walk early—that they should walk before other children of their acquaintance have attempted—that they have frequently caused the above lamentable deformities, which is a standing reproach to them during the rest of their lives.

In fine weather a child ought to be sent out as often as possible. If children lived more in the open air they would neither be so susceptible to disease, nor suffer so much from teething and from catching cold.

On wet days, the child ought to run about a large room, or the hall; and if it does not rain violently, you should put on his hat and throw up the window, taking care while the window is open that he does not stand still. A wet day is the day for him to hold his high court of revelry, and "to make him as happy as the day is long."

Do not allow him to sit any length of time at a table, amusing himself with books, etc.; let him be active and stirring, that his blood may freely circulate as it ought to do, and that his muscles may

be well developed. I would rather see him actively engaged in mischief than sitting still, doing nothing. He ought to be put on the carpet, and should then be tumbled and rolled about to make the blood bound merrily through the vessels, to stir up the liver, to promote digestion, and to open the bowels.

In winter, even if the weather is very cold, you should still send a child out, providing he is well wrapped up. The cold will brace and strengthen him. Cold weather is the finest tonic in the world. In frosty weather, send him out to walk, put a pair of large old woolen stockings *over* his boots or shoes. This will not only keep his legs and feet warm, but it will prevent him from falling down and hurting himself. While thus equipped, he may even walk on a slide of ice without falling down.

In the winter time a child requires plenty of flannel and plenty of food, plenty of fresh and genuine milk, and plenty of water in his tub to wash and bathe him in the morning, plenty of exercise and plenty of play, and then he may brave the frosty air. It is the coddled, the half-washed, and the half-starved child (half-washed and half-starved from either the woman's ignorance or from the mother's timidity), that is the chilly starveling —catching cold at every breath of wind, and every time he goes out into the open air—a puny, skinny, scraggy, scarecrow, more dead than alive, and more fit for the grave than for the rough world he

will have to struggle in. If the above advice is strictly followed, a child may be sent out in the coldest weather.

Amusements.—Let the amusements of a child be as much as possible out of doors; let him spend the greater part of every day in the open air; let him exert himself as much as he please, his feelings will tell him when to rest, and when to begin again; let him be what Nature intended him to be—a happy, laughing, joyous child. Do not let him be always poring over books. He ought to be encouraged to engage in those sports wherein the greatest number of muscles are brought into play. For instance, to play at ball, or hoop, or football; to play at horses, to run to certain distances and back, and if a girl, to amuse herself with skipping rope, such being excellent exercise—

> "By sports like these are all their cares beguiled,
> The sports of children satisfy the child."—*Goldsmith.*

Every child, where practicable, should have a small plot of ground to cultivate, that he may dig and delve in, and make dirt pies if he choose. Children nowadays are not allowed, unfortunately, to soil their hands and their fine clothes. For my own part, I dislike such model children; let a child be natural—let him, as far as possible, choose his own sports. Do not be always interfering with his pursuits, and be finding fault with him. Remember, what may be amusing to you may be distasteful to him. I do not, of course, mean but

that you should constantly have a watchful eye over him, yet do not let him see that he is under restraint or surveillance; if you do you will never discover his true character and inclinations. Not only so, but do not dim the bright sunshine of his early life by constantly checking and thwarting him.

When he is in the nursery or the playground let him shout and riot and romp about as much as he pleases. His lungs and his muscles want developing, and his nerves require strengthening; and how can such be accomplished unless you allow them to be developed and strengthened by natural means?

The nursery is a child's own domain; it is his castle, and he should be Lord Paramount therein. If he chooses to blow a whistle, to spring a rattle, or to make any other hideous noise, which to him is sweet music, he should be allowed to do so. If any members of the family have weak nerves, let them keep at a respectful distance.

A child who never gets into mischief must be either sly, delicate, or idiotic. Indeed, the system many persons employ in bringing up their children, is likely to make them either the one or the other. The present plan of training children is nearly all work (books), and very little play. Play, and plenty of it, is necessary to the very existence of a child.

A boy not partial to mischief, innocent mischief, and play, is unnatural; he is a man before

his time. Girls, at the present time, are made clever simpletons; their brains are worked with useless knowledge, which totally unfits them for everyday duties. Their muscles are allowed to be idle, which makes them limp and flabby. The want of proper exercise ruins the complexion, and their faces become of the color of a tallow candle. And precious wives and mothers they make when they grow up. Grow up, did you say? They grow all manners of ways, and are crooked as crooked sticks.

What an unnatural thing it is to confine a child several hours a day to his lessons; why, you might as well put a colt in harness, and make him work for his living! A child is made for play; his roguish little eye, his lithe figure, his antics, and his drollery, all point out that he is cut out for play—that it is as necessary to his existence as the food he eats, and as the air he breathes.

A child ought not to be allowed to have play-things with which he can injure himself or others, such as toy-swords, toy-cannons, toy-paint boxes, knives, bows and arrows, hammers, chisels, saws, etc. He will be likely to injure himself and others, and will make sad havoc on furniture, house, and other property. Fun, frolic, and play ought, in all innocent ways, to be encouraged; but willful mischief and dangerous games ought, by all means, to be discountenanced. This is frequently much needed, as children prefer to have and delight in dangerous toys, and often coax and

persuade weak and indulgent mothers to gratify their wishes.

Children's paint boxes are very dangerous toys for a child to play with; many of the paints are poisonous, containing arsenic, lead, gamboge, etc., and a child, when painting, is apt to put the brush into his mouth, to absorb the superabundant fluid. Of all the colors, the *green* paint is the most dangerous, as it is frequently composed of arsenite of copper—arsenic and copper—two most deadly poisons.

There are some paint boxes warranted not to contain a particle of poison of any kind; these ought to be chosen by a mother. But remember, although he ought not to be allowed to have poison paint boxes and poison-painted toys, *he must have an abundance of toys*, such as the white wood toys—brewers' drays, express wagons, boxes of wooden bricks, etc. The Noah's Ark is one of the most amusing and instructive toys for a child. "Those fashioned out of brown, unpainted pine wood are the best, I think, because they will survive a good deal of knocklng about, and can be sucked with impunity. From the first dawn of recollection, children are thus familiarized with the forms of natural objects, and may be well up in natural history before they have mastered the A B C."

Parents often make Sunday a day of gloom; to this I must object. Of all the days in the week, Sunday should be the most cheerful and pleasant.

It is considered by the church a festival; and a glorious festival it ought to be made, and one on which our Heavenly Father wishes to see all His children happy and full of innocent joy. Let Sunday, then, be made a cheerful, joyous, innocently happy day, and not, as it frequently is, the most miserable and dismal in the week. It is my firm conviction that many men have been made irreligious by the ridiculously strict and dismal way they were compelled, as children, to spend their Sundays. You can no more make a child religious by gloomy asceticism, than you can make people good by an act of Congress.

Play is absolutely necessary to a child's very existence, as much as are food and sleep. Playgrounds and play are the best schools we have; they teach a great deal not taught elsewhere; they give lessons in health, which is the grandest wealth that can be bestowed—for health is wealth; they prepare the soil for the future schoolmaster; they clear the brain, and thus the intellect; they strengthen the muscles; they make the blood course merrily through the arteries; they bestow healthy food for the lungs; they give an appetite; they make a child, in due time, become every inch a man. Playgrounds and play are one of the finest institutions we possess. What would our large public schools be without their play and ball grounds? They would be shorn of half their splendor and usefulness.

There is so much talk nowadays about *useful*

knowledge, that the importance of play and playgrounds is likely to be forgotten. I cannot help thinking, however, that a better state of things is dawning. "It seems to be found out that in our zeal for useful knowledge, that knowledge is found to be not the least useful which treats boys as active, stirring, aspiring, and ready."

Education.—I heartily approve of Kindergarten schools, if the arrangement is such that health is preferred before learning. Let the children be confined for only three or four hours a day, and let what little they learn be taught as an amusement rather than as a labor. A playground ought to be attached to an infant school; where, in fine weather, for every half-hour they spend indoors, they should spend one in the open air; and in wet weather, they ought to have, in place of the playground, a large room to romp, and shout, and riot in. To develop the different organs, muscles, and other parts of the body, children require plenty of fresh air, the free use of their lungs, active exercise, and their bodies to be thrown in all manner of attitudes. Let a child mope in a corner, and he will become stupid and sickly. The march of intellect, as it is called, or rather the double-quick march of intellect, as it should be called, has stolen a march upon health. Only allow the march of intellect and the march of health to take equal strides, and then we shall have a sound mind in a sound body.

In the education of a young child it is better to

instruct him by illustration, by pictures, and by encouraging observation on things around and about him, than by books. It is surprising how much, without endangering his health, may be taught in this way. In educating your child, be careful to instill and to form good habits—they will then stick to him for life.

Children at the present day are too highly educated—their brains are overtaxed, and thus weakened. *Children* are now taught what formerly *youths* were taught. The chord of a child's life is oft-times snapped asunder in consequence of over education. You should treat a child as you would a young colt. Think only at first of strengthening his body. Let him have a perfectly free, happy life, plenty of food to eat, abundance of air to breathe, and no work to do; there is plenty of time to think of his learning—of giving him brain work. It will come only too soon; but do not make him old before his time.

Remember, as above stated, *the brain must have but very little work until the child is seven years old;* impress this advice upon your memory, and let no foolish ambition to make your child a clever child allow you, for one moment, to swerve from this advice. Build up a strong, healthy body, and in due time the brain will bear a *moderate* amount of intellectual labor. As I have given the mother so much advice, permit me, for one moment, to address a word to the father of the child:

Let me advise you then, Mr. *Paterfamilias*, to be

careful how you converse, what language you use, while in the company of your child. Bear in mind, a child is very observant, and thinks much, weighs well, and seldom forgets all you say and all you do. Let no hasty word, and more especially no oath, or impious language, ever pass your lips, if your child is within hearing. It is at all times wicked to swear; but it is heinously and unpardonably sinful to swear in the presence of your child. "Childhood is like a mirror, catching and reflecting images. One impious or profane thought, uttered by a parent's lip, may operate on the young heart like a careless spray of water thrown upon polished steel, staining it with rust, which no after scouring can efface."

Never talk secrets before a child—"little pitchers have long ears;" if you do, and he discloses your secrets—as most likely he will—and thus make mischief, it will be cruel to scold him; you will, for your imprudence, have only yourself to blame. Be most careful, then, in the presence of your child, of what you say, and of whom you speak. This advice, if followed, may save a great deal of annoyance and vexation.

A child should be taught singing. I consider singing a part of his education. Singing expands the walls of the chest, strengthens and invigorates his lungs, gives sweetness to his voice, improves his pronunciation, and is a great pleasure and amusement to him.

Sleep.—A hair mattress is the best for a child to

lie on. The pillow, too, should be made of hair. A *feather* pillow often causes the head to be bathed in perspiration, thus enervating the child, and making him liable to catch cold. If he is at all rickety, weak in the neck, inclined to stoop, or at all crooked, by all means let him lie without a pillow.

Let him be put on his mattress *awake*, that he may sleep for a couple of hours before dinner, then he will rise refreshed and strengthened for the remainder of the day. I said, let him be put down *awake*. He may cry for the first few times, but by perseverance he will without any difficulty fall to sleep. The practice of sleeping before dinner ought to be continued until he is three years old, and if he can be prevailed upon, even longer. For if he does not have sleep in the middle of the day, he will be cross all the afternoon and the evening, and when he goes to bed he will probably be too tired to sleep, or will fall into a troubled, broken slumber, and not into sweet, soft, gentle repose so characteristic of healthy, happy childhood.

A child ought to be put to bed in the evening, at six in the winter, and at seven o'clock in the summer. *Regularity* ought to be observed, *as regularity is very conducive to health.* It is a reprehensible practice to keep a child up until nine or ten o'clock at night. If this is done he will become old before his time, and the seeds of disease will be sown.

As soon as he can run, let him be encouraged,

for half an hour before he goes to bed, to race either about the hall, or the landing, or a large room, which will be the best means of warming his feet, of preventing chilblains, and of making him sleep soundly.

If a child sleeps alone, place him fairly on his side in the middle of the bed; if it is winter time, see that his arms and hands are covered with the bedclothes; if it is summer, his hands may be allowed to be outside the clothes. In putting him down to sleep, you should ascertain that his face is not covered with the bedclothes; if it is he will be poisoned with his own breath. The breath constantly gives off carbonic acid gas; which gas must be breathed if his face is smothered in the clothes.

You can readily prove the existence of carbonic acid gas in the breath, by simply breathing into a little lime water; after breathing for a few seconds into it, a white film will form on the top; the carbonic acid gas from the breath unites with the lime of the lime water, and the product of the white film is carbonate of lime.

A bedroom ought to be darkened at night; a child sleeps sounder and sweeter in a dark than in a light room. There is nothing better for the purpose of darkening a bedroom than Venetian blinds. Remember, a well-ventilated, but a darkened, chamber at night. The cot or the crib ought *not* to face the window, as the light is best behind.

The best position for a child when sleeping is

on his side; he ought to be accustomed to change about on the right side one night, on the left another, and occasionally he should lie on his back. By adopting this plan, you will not only improve his figure, but likewise his health. Lying, night after night, in one position, would be likely to make him crooked.

Unless the weather is intensely cold, I dislike fires in bedrooms, especially for children; they are very enervating, and make a child liable to catch cold. Cold weather is very bracing, particularly at night. ".Generally speaking, during winter, apartments are too much heated. The temperature in them ought not to exceed 59° Fahrenheit; and even in periods of great cold, scientific men declare that 45° to 50° had better not be exceeded. In the wards of hospitals, and in the chambers of the sick, care is taken not to have greater heat than 56°. Clerks in offices, and other persons of sedentary occupations, when rooms in which they sit are too much heated, are liable to congestion of the brain and to lung complaints. In bedrooms, and particularly those of children, the temperature ought to be maintained rather low; only rarely is it even prudent to make fires in them—especially during the night."

If a cold stable makes a healthy horse, I am quite sure that a moderately cold and well-ventilated bedroom helps to make a healthy child. Still, if the weather is biting cold, a *little* fire in the bedroom is desirable. In bringing up children we

must never run into extremes—the coddling system and the hardening system are both to be deprecated; the coddling system will make the strong child weakly, while the hardening system will probably kill a delicate one.

A child's bed ought to be comfortably clothed with blankets—I say blankets, as they are much superior to coverlids; the perspiration will more readily pass through a blanket than a coverlid. A *thick* coverlid ought never to be used; there is nothing better for a child's bed than the old-fashioned patchwork coverlid, as the perspiration will easily escape through it.

A child should be washed and dressed as soon as he awakes in the morning, if he awakes in anything like reasonable time. If he dozes after he is once awake, such slumber does him more harm than good. He should be up every morning as soon as it is light. If he is taught to rise early, it will make him an early riser for life, and will tend greatly to prolong both his existence and his happiness.

Never awake a child from his sleep to dress him, to give him medicine, or for any other purpose; *let him sleep as long as he can;* but the moment he awakens place him upon his chair, and then let him be washed and dressed. Do not wait until he has wet his bed, until his blood is chilled, and until he is cross, miserable, and uncomfortable. How many babes are made ill by such foolish practices. The moment he leaves his bed turn the

clothes back to the fullest extent, in order that they may be thoroughly ventilated and sweetened. They ought to be exposed to the air for at least an hour before the bed is made. As soon as he leaves his room, be it winter or summer, throw open the windows.

A child ought to sleep alone after he is weaned. He will rest more comfortably, and his sleep will be more refreshing. If your child should not sleep well, try the effects of exercise. Exercise in the open air is the best composing medicine in the world. Let the little fellow be well tired out, and there will be little fear of his not sleeping. Send a child joyful to bed. Do not, if you can possibly help it, let him go to bed crying. Let the last impressions he has at night be of his happy home, and of his loving father and mother, and let his last thoughts be those of joy and gladness. He will sleep all the sounder if he is sent to bed in such a frame of mind, and he will be more refreshed and nourished in the morning by his sleep.

When a child walks in his sleep the usual causes are a disordered stomach, a nervous temperament, or worms. A trusty person ought to sleep in his room, who should have directions given not to arouse him from his sleep, but to gently lead him back to his bed, which may frequently be done without awakening him.

Second dentition.—A child commences to cut his second set of teeth generally when about seven years old. He *begins* to *cut* them at about

that time, but it should be borne in mind that the *second* crop of teeth, *in embryo*, is actually bred and formed from the very commencement of his life, *under* the first tier of teeth, but which remain in abeyance for years, and do not come into play until the *first* teeth, having done their duty, loosen and fall out, and thus make room for *the* more numerous, larger, stronger and more permanent teeth, which later have to last for the remainder of his existence. The *first* set is sometimes cut with a great deal of difficulty, and produces various diseases; the *second*, or permanent teeth, come easily, and are unaccompanied with any disorder. The following is the process: One after another of the *first* set gradually loosen, or either drop out, or with little pain are readily pulled out; under these, the *second*—the permanent—teeth make their appearance, and fill up the vacant spaces. The fang of the tooth that has dropped out is nearly all absorbed or eaten away, leaving little more than the crown. The *first* set consists of twenty; the *second* (including the wisdom-teeth, which are not generally cut until after the age of twenty-seven) consists of thirty-two.

I would recommend you to pay particular attention to the teeth of your children; for, besides their being ornamental, their regularity and soundness are of great importance to the present as well as to the future health of your offspring. If there is any irregularity in the appearance of the *second* set, lose no time in consulting an experienced and reliable dentist.

A mother should be made acquainted with the symptoms of the serious diseases of children. I am not advocating the doctrine that a mother should *treat serious* diseases; far from it; it is not her province, except in certain cases of extreme urgency, where a doctor cannot be procured, and where delay might be death; but I do insist upon the necessity of her knowing the *symptoms* of disease. My belief is that if parents were better informed on such subjects, many children's lives might be saved, much suffering averted, and sorrow spared. The fact is, the knowledge of the symptoms of disease is, to a mother, almost a sealed book. If she were better acquainted with these matters, how much more useful would she be in a sick room, and how much more readily would she enter into the plans and views of the physician. By her knowledge of symptoms, and by having his advice in time, she would nip disease in the bud, and the fight might end in favor of life, for "sickness is just a fight between life and death."

It is really lamentable to contemplate the amount of ignorance that still exists among mothers in all that appertains to the diseases of children; although, fortunately, they are beginning to see and to feel the importance of gaining instruction on such subjects, but the light is only dawning. A writer of the *Medical Times and Gazette* makes the following remarks, which somewhat bear on the subject in question. He observes,—"In spite of

the knowledge and clear views possessed by the profession on all that concerns the management of children, no fact is more palpable than that the most grievous ignorance and incompetency prevail respecting it among the public. We want some means of making popular the knowledge which is now almost restricted to medical men, or, at most, to the well-educated classes."

I think it right to premise, that in all the prescriptions I have given for the use of mothers, I have endeavored to make them as simple as possible, and have, whenever practicable, avoided recommending powerful drugs. Complicated prescriptions and powerful medicines ought to be seldom given, and when they are, should only be administered by a judicious doctor. A child requires much more care and gentleness in his treatment than an adult; indeed, I often think it would be better to leave a child to nature rather than to give him powerful and large doses of medicine.

Water on the brain is, as a rule, a disease of childhood; after a child is seven years old it is comparatively rare. It more frequently attacks delicate children—children who have been dry-nursed (especially if they have been improperly fed), or have been nursed too long, or have had consumptive mothers, or have suffered severely from teething, or are naturally of a feeble constitution. Water on the brain sometimes follows an attack of inflammation of the lungs, more espe-

cially if depressing measures have been adopted. It occasionally follows in the train of contagious eruptive diseases, such as either small-pox or scarlatina. We may divide the symptoms of water on the brain into two stages. The first—the premonitory stage—which lasts four or five days, in which medical aid might be of great avail; the second the stage of drowsiness and of coma—which usually ends in death.

I shall dwell on the first—the premonitory stage—in order that a mother may see the importance of calling in a doctor without loss of time.

If her child is feverish and irritable, if his stomach is disordered, if he has urgent vomitings, or a foul breath, if his appetite is capricious and bad, if his nights are disturbed (screaming out in his sleep), if his bowels are disordered, more especially if they are constipated, if he is more than usually excited, if his eyes gleam with unusual brilliancy, if his tongue runs faster than it is wont, if his cheek is flushed and his head hot, and if he is constantly putting his hand to his head; there is cause for suspicion. If to these symptoms is added, a more than usual carelessness in tumbling about, in hitching his foot in the carpet, or in dragging one foot after the other; if he has complained of darting, shooting, lancinating pains in his head, it may then be known that the *first* stage of inflammation (the forerunner of water on the brain) either has or is about taking place. No time ought to be lost in obtaining medical aid;

for the *commencement* of the disease is the golden opportunity, when life might probably be saved.

Croup.—It is unusual for a child until he is twelve months old to have the croup; but from that time until the age of two years, he is more liable to it than at any other period. The liability after two years, gradually lessens until he is ten years old, after which time it is rare.

A child is more liable to croup in a low and damp, than in a high and dry neighborhood; indeed, in some situations, croup is almost an unknown disease; while in others it is only too well understood.

There is no disease that requires more prompt treatment than croup, and none that creeps on more insidiously. The child at first seems to be laboring under a slight cold, and is troubled with a little *dry* cough; he is hot and fretful, and *hoarse* when he cries. Hoarseness is one of the earliest symptoms of croup, and it should be borne in mind that a young child, unless he is going to have the croup, is seldom hoarse. If your child is hoarse, he should be carefully watched, in order that not a moment be lost in applying the proper remedies as soon as croup is detected.

His voice at length becomes gruff, he breathes as though it were through muslin, and the cough becomes crowing. These three symptoms prove that the disease is now fully formed. These latter symptoms sometimes come on without any previous warning, the little fellow going to bed ap-

parently well, until the mother is awakened, perplexed and frightened, in the middle of the night, by finding him laboring under the characteristic cough and the other symptoms of croup. If she delays to send for assistance, *or if proper medicines are not instantly given*, in a few hours it will probably be of no avail, and in a day or two the little sufferer will be a corpse.

When once a child has had croup the after attacks are generally milder. If he has once had an attack of croup, I should advise you always to have in the house a four-ounce bottle of Wine of Ipecac, to fly to at a moment's notice, but never omit, where practicable, in a case of croup, to send *immediately* for medical aid. There is no disease in which time is more precious than in croup, and where the delay of an hour may decide either for life or for death.

But suppose a doctor is not immediately to be procured, what then am I to do? more especially, as you say, that delay might be death?

What to do.—I never, in my life, lost a child with croup—with catarrhal-croup—where I was called in at the *commencement* of the disease, and where my plans were carried out to the very letter. Let me begin by saying, look well to the goodness and purity of the medicine, for the life of your child may depend upon the medicine being genuine. What medicine? *Wine of Ipecac.* At the earliest dawn of the disease give a teaspoonful of Wine of Ipecac every five minutes,

until free vomiting is excited. In croup, then, before he is safe, free vomiting *must* be established, and that without loss of time. If, after the expiration of an hour, the Wine of Ipecac (having given during that hour one or two teaspoonfuls of it every five minutes) is not sufficiently powerful for the purpose, let the following mixture be substituted:

Take of—Powdered Ipecac, one scruple;
Wine of Ipecac, one ounce and a half.

Make a mixture. One or two teaspoonfuls to be given every five minutes, first well shaking the bottle, until free vomiting is excited.

After the vomiting, place the child for a quarter of an hour in a warm bath.* When out of the bath give him small doses of Wine of Ipecac every two or three hours. The following is a palatable form of the mixture:

Take of—Wine of Ipecac, three drams;
Simple syrup, three drams;
Water, six drams.

Make a mixture. A teaspoonful to be taken every two or three hours.

But remember, the emetic which is given at *first is pure Wine of Ipecac without a drop of either water or syrup.*

A large sponge dipped out of very hot water, and applied to the throat, and frequently renewed, oftentimes affords great relief in croup, and ought to be adopted in all cases during the time the emetic is being administered.

*See "Warm Baths"—directions and precautions to be observed.

Another very convenient and unfailing remedy for croup is found in the following prescription; One teaspoonful of powdered alum, mix it either with a teaspoonful of honey or a tablespoonful of molasses. If vomiting does not follow in fifteen minutes repeat the dose. In case of membranous croup, the membrane can be seen floating in any containing vessel on top of water. The remedy is an invaluable one, and devoid of any danger to the child if often repeated. One or two doses, however, is usually all that is needed to break up any case of croup.

Keep the child from all stimulants; let him live on a low diet, such as milk and water, toast and water, arrowroot, etc.; and keep the room, if practicable, at a temperate heat—60° Fahrenheit —and well ventilated.

The treatment of croup is very simple, and the plan may be carried out by any intelligent mother. Notwithstanding this, it is your duty, where practicable, to send for a physician at the very *onset* of the disease.

Let me again reiterate that, if your child is to be saved, the *Wine of Ipecac must be genuine and good.* This can only be effected by having the medicine from a highly reliable druggist. If your child has ever had croup, let me again urge you *always* to have in the house a four ounce bottle of Wine of Ipecac, that you may resort to at a moment's notice, in case there is the slightest return of the disease.

Wine of Ipecac, unfortunately, is not a medicine that keeps well; therefore, every three or four months a fresh bottle ought to be procured, either from a doctor or a druggist. As long as the Wine of Ipecac remains *clear*, it is good; but as soon as it becomes *turbid*, it is bad, and ought to be replaced by a fresh supply.

What NOT *to do.*—Do not give emetic tartar; do not keep the room very warm; do not give stimulants; do not omit to have always in the house a bottle of Wine of Ipecac.

Child-crowing, or *spurious croup*, as it is sometimes called, is occasionally mistaken for *genuine croup*. It is a more frequent disorder than the latter, and requires a different plan of treatment. Child-crowing is a disease that invariably occurs only during dentition, and is *most perilous;* indeed, painful dentition is *the* cause—*the* only cause—of child-crowing. But, if a child laboring under it can fortunately escape suffocation until he has cut the whole of his first set of teeth, he is then safe.

Child-crowing comes on in paroxysms. The breathing during the intervals is quite natural—indeed, the child appears perfectly well; hence, the dangerous nature of the disease is either overlooked, or is lightly thought of, until perhaps a paroxysm worse than common takes place, and the little patient dies of suffocation; overwhelming the mother with terror, confusion and dismay.

In a paroxysm of child-crowing the *symptoms* are as follows: The child suddenly loses and

fights for his breath, and in doing so, makes a noise very much like that of crowing; hence the name of child-crowing. The face during the paroxysm becomes bluish or livid. In a favorable case, after a frightful struggle to breathe, he regains his breath, and is perfectly well until another paroxysm occurs. In an unfavorable case, the upper part of the windpipe—the glottis—remains for a minute or two closed, and the child, not being able to breathe, drops, a corpse, in his nurse's arms. Many children, who are said to have died of fits, have really died of child-crowing.

The disease is very apt to cause convulsions, which complication adds very much to the danger. Such a complication requires the constant supervision of an experienced and skillful doctor.

I have entered thus rather fully into the subject, as nearly every life might be saved, if a mother knew the nature and the treatment of the complaint, and of the *great necessity during the paroxysm of prompt and proper measures.* For, too frequently, before a doctor has had time to arrive, the child has breathed his last, the parent herself being perfectly ignorant of the necessary treatment; hence the vital importance of the subject, and the paramount necessity of imparting such information.

Treatment.—Have a plentiful supply of cold and hot water always at hand, ready at a moment's notice for use. The instant the paroxysm is upon the child, plentifully and perseveringly dash *cold* water upon his head and face. Put his feet and

legs in *hot* salt, mustard and water, and, if necessary, place him up to his neck in a hot bath, still dashing water upon his face and head If he does not quickly come round, sharply slap his back and thighs.

In every severe paroxysm of child-crowing, put your forefinger down the throat of the child, and pull his tongue forward. This plan of pulling the tongue forward opens the epiglottis (the lid of the glottis), admits air into the lungs, and thus staves off impending suffocation. If this plan were generally known and adopted, many precious lives might be saved.

There is nothing more frightfully agonizing to a mother's feelings than to see her child strangled,—as it were,—before her eyes, by a paroxysm of child-crowing. As soon as a doctor arrives, he will lose no time in thoroughly lancing the gums, and in applying other appropriate remedies. Great care and attention ought to be paid to his diet. If the child is breathing a smoky, close atmosphere, he should be immediately removed to a pure one. In this disease there is no remedy equal to a change of air—to a dry, bracing neighborhood. Change of air, even if it is winter, either to the coast or to a healthy mountainous district, is the best remedy. Where it is not practicable to send a child *from home*, let him be sent out of doors the greater part of every day; let him almost live in the open air. I am quite sure, from an extensive experience, that fresh air and

plenty of it, is the best and principal remedy. Cold sponging of the body too, is useful.

As the subject is so important, let me recapitulate; the gums ought to be well lanced, in order to remove the irritation of painful dentition—painful dentition being the real cause of the disease—cold sponging should be used twice or three times daily. The diet should be carefully attended to (see Dietary of Child); and everything conducive to health should be observed. But, remember after all that can be said about the treatment, there is nothing like change of air, fresh air, cold, dry pure air, and plenty of it. The more the little fellow can inhale, during the day, the better it will be for him; it will be far better than any drug contained in the Pharmacopœia.

I have dwelt on this subject at some length, as nearly every child laboring under this complaint would be saved if the above advice were more generally known and followed; while now, as coroner's inquests abundantly testify, the disease carries off yearly an immense number of victims.

Inflammation of the lungs.—If the child has had a shivering fit; if his skin is very hot and dry, if his lips are parched, if there is great thirst, if his cheeks are flushed, and he is dull and heavy, wishing to be quiet in his cot or crib; his appetite diminished, his tongue furred, his mouth *burning* hot and dry,* his urine scanty and high-colored,

*If you put your finger into the mouth of a child laboring under inflammation of the lungs, it is like putting your finger into a hot apple pie, the heat is so great.

staining the napkin or the linen; *his breathing short, panting, hurried and oppressed, with a hard dry cough, and if his skin is burning hot;*—then there is no doubt that inflammation of the lungs has taken place.

No time should be lost in sending for medical aid; indeed, the *hot, dry mouth and skin, and short, hurried breathing*, would be sufficient cause for your procuring *immediate* assistance. If inflammation of the lungs were properly treated at the *onset*, a child would scarcely ever be lost by that disease. I say this advisedly, for in my own practice, *providing I am called in early, and my plans are strictly carried out*, I scarcely ever lose a child from inflammation of the lungs, You may ask,—What are your plans? I will tell you in case *you cannot promply obtain medical advice*, as delay might be death.

Treatment.—Keep the child to one room, to his bedroom, and to his bed. Let the chamber be properly ventilated. If the weather is cool, build a small fire in the grate; otherwise he is better without a fire. Let him live on low diet, such as weak black tea, milk and water (in equal quantities), and toast and water, thin oatmeal gruel, arrowroot, and such like simple beverages, and give him the following mixture:

Take of—Wine of Ipecac, three drams;
Simple Syrup, three drams;
Water, six drams.

Make a mixture.—A teaspoonful of the mixture to be taken every four hours.

Be careful that you go to a reliable druggist in order *that the quality of the Wine of Ipecac may be good, as the child's life may depend upon it.*

If the medicine produces sickness, so much the better; continue it regularly until the short, oppressed and hurried breathing has subsided, and has become natural.

If the attack is very severe, in addition to the above medicine at once apply a blister, not the common blister, but *D'Albespeyre's Vesicatoria*—a quarter of a sheet. If the child is a year old, the blister ought to be kept on for three hours, and then a piece of dry, soft linen should be applied for another three hours, at the end of which time—six hours—there will be a beautiful blister, which must be cut with a pair of scissors to let out the water; and then let the blister be dressed night and morning with simple cerate spread on lint.

If the little patient is more than one year, say two years old, let the Vesicatoria remain on for five hours, and the dry linen for five hours more, before the blister is cut and dressed. If in a day or two the inflammation still continues violent, let another Vesicatoria be applied, not over the old blister, but let a narrow strip of it be applied on each side of the old blister, and managed in the same manner as before directed.

I cannot speak too highly of D'Albespeyre's Vesicatoria. It has in my hands, through God's blessing, saved the lives of scores of children. It is

far, very far, superior to the old-fashioned blistering plaster. It seldom, if the above rules are strictly observed, fails to rise; it gives much less pain than the common blister; when it has had the desired effect, it readily heals, which cannot always be said of the common fly blister, more especially with children.

My sheet anchors, in inflammation of the lungs of children are, Wine of Ipecac and *D'Albespeyre's Vesicatoria*. Let the greatest care be observed in obtaining genuine and good Wine of Ipecac. This can be only depended upon by having the medicine from a good reliable druggist. Wine of Ipecac, when genuine and good, is, in many children's diseases, one of the most valuable of medicines.

What NOT *to do.*—Avoid—*emphatically let me say so*—giving emetic tartar. It is one of the most lowering and death-dealing medicines that can be administered to an infant or to a child. If you wish to try the effect of it, take a dose yourself, and I am quite sure that you will then never be inclined to poison a child with any such abominable preparation. In olden times—many, many years ago—I gave it in inflammation of the lungs, and lost many children. Since leaving it off, the recoveries of patients by the Ipecac treatment, combined with the external application of *D'Albespeyre's Vesicatoria*, have been in many cases marvelous. Avoid broths and wine, and all stimulants. Do *not* put the child into a warm bath;

it only oppresses the already oppressed breathing. After he is out of the bath, it causes a larger quantity of blood to rush back to the lungs and to the bronchial tubes, and thus feeds the inflammation. Do not keep the temperature of the room high. A small fire, in the winter time, encourages ventilation, and in such a case does good. When the little patient is on the mother's lap, do not burden him with a *heavy* blanket or a *thick* shawl. Either a *thin* child's blanket, or a thin *woolen* shawl, in addition to his usual nightgown, is all the clothing necessary.

Bronchitis is a much more frequent disease than inflammation of the lungs; indeed, it is one of the most common complaints both of infants and of children, while inflammation of the lungs is comparatively a rare disease. Bronchitis is not nearly such a dangerous disease as inflammation of the lungs.

The symptoms.—The child for the first few days labors under symptoms of a heavy cold; he has not his usual spirits. In two or three days, instead of the cold leaving him, it becomes more confirmed; he is now really sick, fretful, and feverish; his breathing becomes rather hurried and oppressed; his cough is hard, dry and loud; he wheezes, and if you put your ear to his naked back, between his shoulder blades, you will hear the wheezing more distinctly. If at the breast, he does not nurse with his usual avidity; the cough, notwithstanding the breast is a great comfort to

him, compels him frequently to loose the nipple; his urine is scanty and rather high colored, staining the napkin, and smelling strongly. He is generally worse at night.

Remember, if the child is feverish, if he has symptoms of a heavy cold, if he has an oppression of breathing, if he wheezes and has a tight, dry, noisy cough, you may be satisfied that he has an attack of bronchitis.

In bronchitis the skin is warm but moist; in inflammation of the lungs it is hot and dry; in bronchitis the mouth is warmer than usual, but moist; in inflammation of the lungs it is burning hot; in bronchitis the breathing is rather hurried, and attended with wheezing; in inflammation of the lungs it is very short and panting, and is unaccompanied with wheezing, although occasionally a very slight crackling sound may be heard; in bronchitis the cough is long and noisy; in inflammation of the lungs it is short and feeble; in bronchitis the child is cross and fretful; in inflammation of the lungs he is dull and heavy, and his countenance denotes distress.

We have sometimes a combination of bronchitis and of inflammation of the lungs, an attack of the latter following the former. Then the symptoms will be modified, and will partake of the character of the two diseases.

Treatment.—Confine the child to his bedroom, and if very ill, to his bed. If it is winter, have a little fire in the grate, but be sure that the temper-

ature of the chamber is not above 60° Fahrenheit, and let the room be properly ventilated, which may be effected by occasionally leaving the door a little ajar.

Place him *outside* the bed or on a sofa; if he is very ill, *inside* the bed, with a sheet and a blanket only to cover him, but no thick coverlid. If he is allowed to lie on the lap, it only heats and makes him restless. If he will not lie on the bed, let him rest on a pillow placed on the lap; the pillow will cause him to lie cooler, and will more comfortably rest his wearied body. If he is at the breast, keep him to it, and give no artificial food, unless a little toast and water if he is thirsty. If he is weaned, let him have either milk and water, toast and water, barley water, or weak black tea, with plenty of new milk in it, etc., but, until the inflammation has subsided, neither broth nor beef tea.

In mild cases but little medicine is needed. When the fever comes on in the after part of the day, it is well to give a mild febrifuge, as follows:

Take of—Potas Citrate, one dram;
Syrup of Ipecac, one dram;
Paregoric, one dram;
Rock Candy, two ounces;
Water (hot), three ounces.

The dose for a child two to four years old, would be a teaspoonful every two or three hours, till the child sleeps.

A good medicine is Wine of Ipecac, given in large doses, so as to produce constant nausea. The Wine of Ipecac abates fever, acts on the skin,

loosens the cough, and, in the majority of cases, will rapidly effect a cure. I have in a preceding paragraph given you a prescription for the Wine of Ipecac Mixture. A teaspoonful of the mixture should be taken every four hours.

If in a day or two he is no better, but worse, by all means continue the mixture, whether it produces sickness or otherwise, and put on the chest a *Vesicatoria*, a quarter of a sheet.

The Wine of Ipecac and the Vesicatoria are my sheet anchors in the bronchitis, both of infants and of children. They rarely, even in very severe cases, fail to effect a cure, providing the Vesicatoria is properly applied, and the Wine of Ipecac is genuine and of good quality.

If there is any difficulty in procuring *good* Wine of Ipecac, the ipecac may be given in powder instead of the wine. The following is a pleasant form:

Take of—Powder of Ipecac, twelve grains;
Powdered White Sugar, thirty-six grains.

Mix well together, and divide into twelve powders. One of the powders to be put dry on the tongue every four hours.

The ipecac powder will keep better than the wine—an important consideration to those living in country places; nevertheless, if the wine can be procured fresh and good, I far prefer the wine to the powder.

When the bronchitis has disappeared, the diet ought gradually to be improved—rice, sago, tapioca, light batter-pudding, etc., and, in a few

days, either a little chicken or a mutton chop, mixed with a well-mashed potato and crumb of bread, should be given, But let the improvement in his diet be gradual, or the inflammation may return.

What NOT *to do.*—Do not give either emetic tartar or antimonial wine, which is emetic tartar dissolved in wine. Do not administer either paregoric or syrup of poppies, either of which would stop the cough, and would thus prevent the expulsion of the phlegm. Any fool can stop a cough, but it requires a wise man to rectify the mischief. A cough is an effort of Nature to bring up the phlegm, which would otherwise accumulate, and in the end cause death. Again, let me urge upon you the immense importance of *not* stopping the cough of a child. The Wine of Ipecac will loosen the cough by loosening the phlegm, which is the only right way to get rid of a cough. Let what I have now said be impressed deeply upon your memory, as thousands of children are annually destroyed by having their coughs stopped. Avoid giving him broths, meat, and stimulants of all kinds, until the bronchitis is relieved. For further observation on *what* NOT *to do* in bronchitis, I beg to refer you to a previous paragraph on *what* NOT *to do* in inflammation of the lungs. That which is injurious in the one case is equally so in the other.

Diphtheria.—This terrible disease, although by many considered a new complaint, is of very ancient origin.

The symptoms.—The little patient, before the disease really shows itself, feels poorly, and is out of sorts. A shivering fit, though not severe, may generally be noticed. There is heaviness, and slight headache, principally over the eyes. Sometimes, but not always, there is a mild attack of delirium at night. The next day he complains of slight difficulty of swallowing. If old enough, he will complain of constriction about the throat. On examining the throat the tonsils will be found to be swollen and more red than usual. Slight specks will be noticed on the tonsils. In a day or two an exudation will cover them, the back of the palate, the tongue, and sometimes the inside of the cheeks and the nostrils. This exudation of lymph gradually increases until it becomes a regular membrane, which puts on the appearance of leather, hence its name diphtheria. This membrane peels off in pieces, and if the child is old and strong enough he will sometimes spit it up in quantities, the membrane again and again rapidly forming as before. The discharges from the throat are occasionally, but not always, offensive. There is danger of croup from the extension of the membrane into the windpipe. The glands about the neck and under the jaw are generally much swollen, and the skin is rather cold and clammy; the urine is scanty and usually pale; the bowels at first are frequently relaxed. The diarrhœa may or may not cease as the disease advances.

The child is now in a perilous condition, and it

becomes a battle between his constitution and the disease. If, unfortunately, as is too often the case—diphtheria being more likely to attack the weakly—the child is very delicate, there is but slight hope of recovery. The danger of the disease is not always to be measured by the state of the throat. Sometimes when the patient appears to be getting well, a sudden change for the worse rapidly carries him off. Hence the importance of great caution, in such cases, in giving an opinion as to ultimate recovery. I have said enough to prove the terrible nature of the disease, and to show the necessity of calling in, at the earliest period of the symptoms, an experienced and skillful doctor.

Diphtheria is contagious, therefore, when practicable, the rest of the children ought instantly to be removed to a distance. I say *children*, for it is emphatically a disease of childhood. When adults have it, it is the exception and not the rule.

The causes of diphtheria are bad and imperfect drainage; want of ventilation; overflowing privies; low neighborhoods in the vicinity of rivers; stagnant waters, indeed, everything that vitiates the air, and thus depresses the system, more especially if the weather is close and muggy; poor and improper food; and last, though not least, contagion. Bear in mind, too, that a delicate child is much more predisposed to the disease than a strong one.

What to do.—Examine well into the ventilation, for as diphtheria is frequently caused by deficient

ventilation, the best remedy is thorough ventilation. Look well to the drains and the privies, and see that the drains from the water-closets and the privies do not in any way contaminate the well water. If the drains are defective or the privies full, the disease in your child will be generated, fed, and fostered. Not only so, but the disease will spread in your family all around you.

Keep the child to his bedroom and to his bed. For the first two or three days, while the fever runs high, put him on a low diet, such as milk, tea, arrowroot, etc. Apply to his throat, every four hours, a warm bran and oatmeal poultice. If he is old enough to have the knowledge to use a gargle, the following will be found serviceable:

Take of—Permanganate of Potash, pure, four grains;
Water, eight ounces.

To make a gargle.

Or,

Take of—Bromo Chloralum, two drams;
Glycerine, one ounce;
Water, three ounces.

Make a gargle and use it freely two or three hours apart.

Another remedy is:

Take of—Carbolic Acid, forty drops;
Glycerine, one half ounce;
Water, one half ounce.

Mix, and apply with a soft swab three times a day.

The best medicine for the first few days of the attack is the following mixture:

Take of—Compound Tinct. Cinchona, two ounces,
Potas Chlorate, two drams.

Make a mixture.—Dose for a child four years old, a teaspoonful every four hours.

Or, chlorate of potash may be given in the form of powder;

Take of—Chlorate of Potash, two scruples;
Lump Sugar, one dram.

Mix, and divide into eight powders. One to be put into a dry teaspoon and then placed on the tongue every three hours. These powders are very useful in diphtheria; they are very cleansing to the tongue and throat. If they produce much smarting, as where the mouth is very sore they sometimes do, let the patient, after taking one, drink plenty of milk; indeed, I have known these powders induce a patient to take nourishment, in the form of milk, which he otherwise would not have done, and thus to have saved him from dying of starvation, which, before taking the powders, there was every probability of his doing. An extensive experience has demonstrated to me the great value of these powders in diphtheria; but they must be put on the tongue dry.

As soon as the skin has lost its preternatural heat, beef tea and chicken broth ought to be given. Or if great prostration should supervene, in addition to the beef tea, port wine, a tablespoonful every four hours, should be administered. If the, child is cold, and there is great sinking of the vital powers, brandy and water should be substituted for the port wine. Remember, in ordinary cases, port wine and brandy are not necessary; *but in cases of extreme exhaustion* they are most valuable.

As soon as the great heat of the skin has abated and the debility has set in, one of the following mixtures will be found useful:

Take of—Wine of Iron, one ounce and a half;
Simple Syrup, one ounce;
Water, three ounces and a half.

To make a mixture—A tablespoonful to be taken every four hours.

Or,

Take of—Tincture of Perchloride of Iron, one dram;
Simple Syrup, one ounce;
Water, three ounces.

To make a mixture.—A tablespoonful to be taken three times a day.

If the disease should travel downward, it will cause all the symptoms of croup; then it must be treated as croup; with only this difference, that a blister must *not* be applied, or the blistered surface may be attacked by the membrane of diphtheria, which may either cause death or hasten that catastrophe. In every other respect treat the case as croup, by giving an emetic, a teaspoonful of Wine of Ipecac every five minutes, until free vomiting is excited, and then administer smaller doses of Wine of Ipecac every two or three hours, as I recommended in the treatment of croup.

The following simple remedies have recently been highly recommended:

"Put a teaspoonful of sulphur into a wine glass of water and stir it with the finger instead of a spoon, as the sulphur does not readily amalgamate with water. When the sulphur is well mixed, then it is to be given to the patient to gargle, and after gargling to swallow it, and the patient will be out of danger in ten minutes. When the fungus is too nearly closing to allow the gargling, the sulphur, in that case, should be blown through a quill into the throat, and after the fungus has

shrunk to allow of it, then the gargling. If a patient cannot gargle, take a live coal, put it on a shovel, and sprinkle a spoonful of flour of brimstone upon it; let the sufferer inhale it by holding the head over it, and the fungus will die. Sulphur kills every species of fungus in man, beast and plant in a few minutes. Recently at Princess Mary's Cottage Home, London, an outbreak of diphtheria attacked fifty of the inmates. One of the lady nurses cured them all by causing the patients to gargle with sulphur and swallow the gargle." Or, "Take ten grains of permanganate of potassium and mix with one ounce of cold water. As soon as dissolved it must be applied with a rag or sponge, mop or swab, to the whitish places in the tonsils and other parts that have the diphtheria membrane on. Do this very gently, but thoroughly, every three hours until better; then every six hours until well. It does not give pain, but is rather nauseous to the taste. If the tongue is coated white, I mix one dram of hyposulphite of soda and five drops of oil of sassafras in four ounces of syrup made of sugar and hot water, and give a teaspoonful every one to three hours as needed, when awake. If the tongue is not coated white, I mix twenty drops of tincture of phytolacca to four ounces of cold water, and give a teaspoonful every one to three hours, as needed, when awake. The phytolacca is the common poke-root of the South, and, as it loses its strength by drying and age, the tincture

should be from the fresh root, or it is worthless."

It is well to apply a little sweet oil or cosmoline to the outside of the throat to protect it from the action of the air, as the patient must be protected from all danger of getting chilled.

In the beginning of the disease, in mild cases, the above solution of permanganate of potassium is all that is needed, as the disease is local at first, but it rapidly affects the whole system when seated. In the stinking form of diphtheria this solution soon destroys the smell, and in every case it destroys the diphtheria membrane without leaving any bad effect behind.

What NOT *to do.*—Do not on any account apply a blister. If the latter is applied, it is almost sure to be covered with the membrane of diphtheria, similar to the inside of the mouth and of the throat, which would be a serious complication. Do not give emetic tartar. Do not depress the system by aperients, for diphtheria is an awfully depressing complaint of itself; the patient is laboring under the depressing effects of poison, for the blood has been poisoned either by the drinking water being contaminated by fæcal matter from either a privy or a water-closet; by some horrid drain; by proximity to a pig-sty; by an overflowing privy, especially if vegetable matter is decaying at the same time in it; by bad ventilation, or by contagion. Diphtheria may generally be traced to one or the other of the above causes; therefore let me urgently entreat you to look well into these

matters, and thus to stay the pestilence. Diphtheria might long remain in a neighborhood if active measures were not taken to exterminate it.

Measles commences with symptoms of a common cold; the patient is at first chilly, then hot and feverish; he has a running at the nose, sneezing, watering, and redness of the eyes, headache, drowsiness, a hoarse and peculiar ringing cough, which nurses call "measle-cough," and difficulty of breathing. These symptoms usually last three days; on the fourth the eruption generally makes its appearance, and continues for four days and then disappears, lasting altogether from the commencement of the symptoms of cold to the decline of the eruption, seven days. It is important to bear in mind that the eruption consists of *crescent-shaped patches;* that they usually appear first about the face and neck, in which places they are the best marked; then on the body and on the arms; and, lastly on the legs, and that they are slightly raised above the surface of the skin. The face is swollen, more especially the eyelids, which are sometimes closed for a few days.

Remember, *running at the nose, sneezing, a peculiar hoarse cough, and half-moon-shaped patches*, are the leading features of the disease, and point out for a certainty that it is measles.

The principal danger in measles arises from the affection of the chest. The mucus or lining membrane of the bronchial tubes is always more or less inflamed, and the lungs are sometimes affected.

The only way to throw out the eruption, is to keep the body comfortably warm, and to give the beverages ordered by the doctor, with the chill off. Surfeit water, saffron tea, and remedies of that class, are hot and stimulating. The only effect they can have will be to increase the fever and inflammation—to add fuel to the fire.

What to do.—The child ought to be confined to his bed, and the room kept comfortably warm. If it is winter time, there should be a small fire in the room; in the summer time the fire would be improper. The child must not be exposed to draughts; though from time to time, the door ought to be left a little ajar in order to change the air of the apartment; for proper ventilation, let the disease be what it may, is absolutely necessary. Keep the child, for the first few days, on a low diet, such as milk and water, arrowroot, bread and butter, etc.

If the attack is mild, that is, if the breathing is not much affected, and there is not much wheezing, the Acidulated Infusion of Roses' Mixture* will be all that is necessary.

In case the breathing is short, and there is a great wheezing, instead of giving the mixture just advised, give a teaspoonful of a mixture composed of Wine of Ipecac, Syrup and Water,† every four hours. If on the following day, the breathing is not relieved, in addition to the Ipecac

*See page 403. †See page 432.

Mixture, apply a Vesicatoria, as advised under the head of Inflammation of the Lungs.

When the child is convalescing, batter puddings, rice and sago puddings, in addition to the milk, bread and butter, etc., should be given; and, a few days later, chicken, mutton chops, etc., etc. *The child ought not, even in a mild case of measles, and in favorable weather, to be allowed to leave the house under two weeks, or it might bring on an attack of bronchitis.*

What NOT *to do.*—Do not give either *surfeit water* or wine. Do not apply leeches to the chest. Do not expose the child to the cold air. Do not keep the bedroom very hot, but comfortably warm. Do not let the child leave the house, even under favorable circumstances under two weeks. Do not, while the eruption is out, give aperients. Do not administer emetic tartar or paregoric to ease the cough—the former drug is very depressing; the latter will stop the cough, and will thus prevent the expulsion of the phlegm.

Scarlatina and scarlet fever are indeed one and the same disease, scarlatina being the Latin for scarlet fever. But, in a *popular* sense, when the disease is mild, it is usually called scarlatina. The latter term does not sound so formidable to the ears either of patients or parents.

Symptoms of scarlet fever.—The patient is generally chilly, languid, drowsy, feverish and poorly for two days before the eruption appears. At the end of the second, the characteristic bright scar-

let efflorescence, somewhat similar to the color of a boiled lobster, usually first shows itself. The scarlet appearance is not confined to the skin, but the tongue, throat and whites of the eyes put on the same appearance; with only this difference, that on the tongue and on the throat the scarlet is much darker, and, as Dr. Elliotson accurately describes it,—"The tongue looks as if it had been slightly sprinkled with Cayenne pepper;" the tongue, at other times, looks like a strawberry; when it does it is called the *strawberry tongue.* The eruption usually declines on the fifth, and is generally indistinct on the sixth day; on the seventh it has completely faded away. After the first few days there is usually great itching on the surface of the body. At the end of the week the skin begins to peel and to dust off, making it look as though meal had been sprinkled upon it.

There are three forms of scarlet fever—the one where the throat is little, if at all, affected, and this is a mild form of the disease; the second, which at night is generally attended with delirium, where the throat is *much* affected, being often greatly inflamed and ulcerated, and the third (which is, except in certain unhealthy districts, comparatively rare, and which is VERY dangerous), the malignant form.

Cooling physic ought on no account whatever to be given. Aperient medicines are highly improper and dangerous both before and during the period of the eruption. It is my firm conviction that

the administration of physic at such times, is one of the principal causes why scarlet fever is so frequently fatal. This is more applicable to the poor, and to those who are unable to procure a skillful physician.

The principal danger in scarlet fever arises from the affection of the throat, the administration of aperients during the first ten days, and a peculiar disease of the kidneys ending in dropsy; on which account, the doctor ought, when practicable, to be sent for at the onset, that no time may be lost in applying *proper* remedies.

When scarlet fever is complicated—as it sometimes is—with diphtheria, the diphtheric membrane is very apt to travel into the windpipe, and thus to cause diphtheric croup; it is almost sure, when such is the case, to end in death. When a child dies from such a complication, the death might truly be said to be owing to diphtheric croup, and not to scarlet fever, for if the diphtheric croup had not occurred, in all probability the child would have been saved. The deaths from diphtheria are generally from diphtheric croup.

How to distinguish between scarlet fever and measles.—Measles commences with symptoms of a common cold, scarlet fever does not. Measles has a *peculiar hoarse* cough, scarlet fever has not. The eruption of measles is in patches of a half-moon shape, and is slightly raised above the skin; the eruption of scarlet fever is *not* raised above the skin at all, and is one continued mass. The color

of the eruption is much more vivid in scarlet fever than in measles. The chest is the part principally affected in measles, and the throat in scarlet fever.

There is an excellent method of determining, for a certainty, whether the eruption is that of scarlatina or otherwise. I have in several instances ascertained the truth of it: "For several years M. Bouchut has remarked in the eruptions of scarlatina a curious phenomenon, which serves to distinguish this eruption from that of measles, erythema, erysipelas, etc., a phenomenon essentially vital, and which is connected with the excessive contractibility of the capillaries. The phenomenon in question is a *white line*, which can be produced at pleasure by drawing the back of the nail along the skin where the eruption is situated. On drawing the nail, or the extremity of a hard body (such as a penholder), along the eruption, the skin is observed to grow pale, and to present a white trace, which remains for one or two minutes, or longer, and then disappears. In this way the diagnosis of the disease may be very distinctly written on the skin; the word 'scarlatina' disappears as the eruption regains its uniform tint."

It is of much importance to distinguish between scarlet fever and measles, as in measles the patient ought to be kept *moderately* warm, and the drinks should be given with the chill off, while in scarlet fever the patient ought to be kept cool and the beverages, such as spring water, toast and

water, etc., should be administered quite cold, only one-half wine glass at once.

What to do.—Do not fail to pay attention to my rules, and carry out my directions to the letter. I can then promise, *that if the scarlet fever is neither malignant nor complicated with diphtheria*, the plan I am about to advise will, with God's blessing, be usually successful.

What is the first thing to be done? Send the child to bed; throw open the windows, be it winter or summer, and have a thorough ventilation; for the bedroom must be kept cool, 68° to 70° Fahrenheit, according to the intensity of the fever. Do not be afraid of fresh air, for fresh air, for the first few days, is essential to recovery. *Fresh air, and plenty of it, in scarlet fever is the best doctor a* child can have; let these words be written legibly on your mind.

If the weather is either intensely cold or very damp, there is no objection to a small fire in the room, providing there is at the same time, air—an abundance of fresh air—admitted into the room. If it is summer time, let the child be covered with only a sheet; if it is winter time, in addition to the sheet, he should have one blanket over him.

Now for the throat. The best *external* application is a bran and oatmeal poultice. Put half a teacupful of bran into a saucepan, put it on the fire to boil; as soon as it boils, take it off the fire, and stir oatmeal into it, until it is of the consistence of a nice soft poultice; then place it on a rag, and

apply it to the throat; carefully fasten it on with a bandage, two or three turns of the bandage going around the throat, and two or three over the crown of the head, so as nicely to apply the poultice where it is wanted—that is, to cover the tonsils. Tack the bandage; do not pin it. Change the poultice three times a day. The best medicine is the Acidulated Infusion of Roses, sweetened with syrup:

Take of—Diluted Sulphuric Acid, half a dram;
Simple Syrup, one ounce and a half;
Acid Infusion of Roses, four ounces and a half.

To make a mixture.—A tablespoonful to be taken every four hours.

It is grateful and refreshing, it is pleasant to take, it abates fever and thirst, it cleanses the throat and tongue of mucus, and is peculiarly efficacious in scarlet fever; as soon as the fever is abated it gives an appetite. My belief is that the sulphuric acid in the mixture is a specific in scarlet fever, as much as quinine is in ague, and sulphur in itch. I have reason to say so, for in numerous cases I have seen its immense value.

Diet.—If the child is at the breast, keep him entirely to it. If he is weaned, and under two years of age, give him milk and water, and cold water to drink. If he is older give him toast and water, and plain water from the pump, as much as he chooses; let it be quite cold—the colder the better. Weak black tea, or thin gruel, may be given, but not caring, unless an infant at the breast, if he

takes nothing but *cold* water. If the child is two years old and upward, roasted apples with sugar and grapes, will be very refreshing, and will tend to cleanse both the mouth and the throat. Avoid broths and stimulants.

When the appetite returns you may consider the patient safe. The diet ought now to be gradually improved. Bread and butter, milk and water, and arrowroot should be given for the first two or three days. Then a light batter or rice pudding may be added, and in a few days, either a little chicken or a mutton chop.

The essential remedies in scarlet fever are, for the first few days—plenty of fresh air and ventilation; plenty of cold water to drink; yeast or bran poultices to the throat, and the Acidulated Infusion of Roses mixture as a medicine.

Now comes very important advice. After the first few days, probably five or six, sometimes as early as the fourth day—*watch carefully and warily, and note the time, the skin will suddenly become cool,* the child will say that he feels chilly; then is the time you must change your tactics—*instantly close the windows and put extra clothing*, a blanket or two, on his bed. A flannel nightgown should, until the dead skin has pulled off, be worn next the skin, when the flannel nightgown should be discontinued. The patient ought ever after to wear, in the daytime, a flannel waistcoat. His drinks must now be given with the chill off; he ought to have a warm cup of tea, and gradually his diet should be improved.

There is one important caution I wish to impress upon you—*do not give cathartics while the eruption is out.* In all probability the bowels will be opened; if so, well and good; but do not, on any account, for the first ten days, use artificial means to open them. It is my firm conviction that the administration of purgatives in scarlet fever is a fruitful source of dropsy, of disease, and death. When we take into consideration the sympathy there is between the skin and the mucus membrane, I think that we should pause before giving irritating medicines, such as purgatives. The irritation of aperients on the mucus membrane may cause the poison of the skin disease (for scarlet fever is a blood-poison) to be driven internally to the kidneys, to the throat, to the pericardium (membrane containing the heart), or to the brain. You may say, Do you not purge if the bowels are not open for a week? I say emphatically, No.

I consider my great success in the treatment of scarlet fever to be partly owing to my avoidance of aperients during the first ten days of the child's illness.

If the bowels, after the ten days, are not properly opened, a dose or two of syrup of senna should be given; that is, one or two teaspoonfuls should be administered early in the morning, and should, if the first dose does not operate, be repeated in four hours.

In a subsequent paragraph I shall strongly urge you not to allow your child, when convalescent, to

leave the house for at least a month from the commencement of the illness; I therefore refer you to that paragraph, and hope that you will give it your best and earnest consideration. During the last twenty years I have never had dropsy from scarlet fever, and I attribute it entirely to the plan I have just recommended, and in not allowing my patients to leave the house under a month— in fact, until the skin that had peeled off had been renewed.

Let me now sum up the plan I adopt, and which I beg leave to designate as—The Fresh Air Treatment of Scarlet Fever:

1. Thorough ventilation, a cool room, and scant clothes on the bed, for the first five or six days.

2. A change of temperature of the skin to be carefully regarded. As soon as the skin is cool, closing the windows, and putting additional clothing on the bed.

3. The Acidulated Infusion of Roses with Syrup is a worthy medicine for scarlet fever.

4. Purgatives to be religiously avoided for the first ten days at least, and even afterward, unless there is absolute necessity.

5. Leeches, blisters, emetics, cold and tepid spongings, and painting the tonsils with caustic, inadmissible in scarlet fever.

6. A strict antiphlogistic (low) diet for the first few days, during which time cold water is to be given freely.

The patient *not* to leave the house in the summer under a month; in the winter, under six weeks.

What NOT *to do.*—Do not apply either leeches or blisters to the throat; do not paint the tonsils with caustic; do not give aperients; do not give emetic tartar; do not, for the first few days of the illness, be afraid of *cold air* to the skin, and of cold water as a beverage; do not, emphatically let me say, *do not* let the child leave the house for at least a month from the commencement of the illness.

My firm conviction is, that purgatives, emetics and blisters, by depressing the patient, sometimes cause ordinary scarlet fever to degenerate into malignant scarlet fever.

I am aware that some of our first authorities advocate a different plan to mine. They recommend purgatives, which, I may say, are my dread and abhorrence. They advise cold and tepid sponging—a plan which I think dangerous, as it will probably drive the disease internally. Blisters, too, have been prescribed; these I consider weakening, injurious and barbarous, and likely still more to inflame the already inflamed skin. They recommend leeches to the throat, which I am convinced, by depressing the patient, will lessen the chance of his battling against the disease, and will increase the ulceration of the tonsils. Again, the patient has not too much blood, the blood is only poisoned. I look upon scarlet fever as a specific poison of the blood, and one which will be eliminated from the system, *not* by bleeding, *not* by purgatives, *not* by emetics, but by a constant supply of fresh and cool air, by the

acid treatment, by cold water as a beverage, and for the first few days by a strict antiphlogistic (low) diet. Sydenham says that scarlet fever is oftentimes "fatal through the officiousness of the doctor." I conscientiously believe that a truer remark was never made, and that under a different system to the usual one adopted, scarlet fever would not be so much dreaded.

Dr. Budd recommends that the body, including the scalp, of a scarlet fever patient, should be anointed every night and morning, after the fourth day, with camphorated oil; this anointing to be continued until the patient is able to take a warm bath and use disinfectant soap; this application will not only be very agreeable to the patient's feelings, as there is usually great irritation and itching of the skin, but it will be an important means of preventing the dead skin, which is highly infectious, and which comes off partly in flakes and partly floats about the air in dust, from infecting other persons. The plan is an excellent one, and cannot be too strongly recommended.

If the case is a combination of scarlet fever and diphtheria, as it unfortunately now frequently is, treat it as a case of diphtheria.

A child must *not* be allowed to go out for at least a month from the commencement of the attack, in the summer, and six weeks in the winter; and not even then without the express permission of a doctor. It may be said that this is an unreasonable recommendation; but when it is considered

that the whole of the skin generally peels off, and consequently leaves the surface of the body exposed to cold, which cold flies to the kidneys, producing a peculiar and serious disease in them, ending in dropsy, this warning will not be deemed unreasonable.

Scarlet fever dropsy, which is really a *formidable disease, generally arises from the carelessness, the ignorance, and the thoughtlessness of parents in allowing a child to leave the house before the new skin is properly formed and hardened.* Prevention is better than cure.

Thus far with regard to the danger to the child himself. Now let me show you the risk of contagion that you inflict upon families, in allowing your child to mix with others before a month at least has elapsed. Bear in mind, a case is quite as contagious while the skin is peeling off, as it was before. Thus, in ten days or two weeks, there is as much risk of contagion as at the *beginning* of the disease, and when the fever is at its height. At the conclusion of the month, the old skin has generally all peeled off, and the new skin has taken its place; consequently there will be less fear of contagion to others. But the contagion of scarlet fever is so subtle and so uncertain in its duration, that it is impossible to fix the exact time when it ceases. Let me most earnestly implore you to ponder well on the above important facts. If these remarks should be the means of saving only one child from death, or from broken health, my labor will not have been in vain.

To purify a house, clothes, and furniture, from the contagion of scarlet fever, let every room in the house, together with its contents, and clothing and dresses that cannot be washed, be well fumigated with sulphur—taking care to close both windows and doors while disinfecting the house; let every room be *lime-washed* and then white-washed; if the contagion has been virulent, let every bedroom be freshly papered (the walls having been previously stripped of the old paper and then lime-washed); let the bed, the bolsters, the pillows, and the mattresses be cleaned and purified; let the blankets and coverlids be thoroughly washed, and then let them be exposed to the open air—if taken into a field so much the better; let the rooms be well scoured; let the windows, top and bottom, be thrown open; let the drains be examined; let the well water be scrutinized, to see that it is not contaminated by fæcal matter, either from the water-closet, the privy, the pig-stye, or the stable; let the privies be emptied of their contents—*remember, this is most important advice*—then put into the empty places, either lime and powdered charcoal, or carbolic acid. It is a well ascertained fact that it is frequently impossible to rid a house of the infection of scarlet fever without adopting such a course. Let the children, who have not had, or who do not appear to be sickening for scarlet fever, be sent away from home—if to a farm house so much the better. Indeed, leave no stone unturned, no means untried, to exter-

minate the disease from the house and from the neighborhood.

Precautions to be taken against the spread of scarlet fever.—Great care should be taken to separate the healthy from the infected. The nurses selected for attending scarlet fever patients should be those who have previously had scarlet fever themselves. Dirty linen should be removed at once, and be put into boiling water. Very little furniture should be in the room of a scarlet fever patient—the less the better—it only obstructs the circulation of the air, and harbors the scarlet fever poison. The most scrupulous attention to cleanliness should be observed in these cases. A patient who has recovered from scarlet fever before he associates with healthy people, should, for three or four consecutive mornings, have a warm bath, and well wash himself with soap while in the bath; he will, by adopting this plan, get rid of the dead skin, and thus remove the infected particles of the disease. If scarlet fever should appear in a school, the school must be broken up, in order that the disease may be stamped out. There must be no half measures where such a fearful disease is in question. A house containing scarlet fever patients should be avoided as the plague; it is folly at any time to put one's head into the lion's mouth. Chloralum, carbolic acid, and chloride of lime, are each and all good disinfectants, but not one is to be compared to perfect cleanliness and to an abundance of fresh and pure air—the last of which may

truly *par excellence* be called God's disinfectant. Either a tablespoonful of chloralum, or two teaspoonfuls of carbolic acid, or a teaspoonful of chloride of lime in a pint of water, are useful to sprinkle the soiled handkerchiefs as soon as they are done with, and before they are washed; to put in the *pot-de-chambre* and to keep in saucers about the room; but remember, as I have said before, and cannot repeat too often, there is no preventive like the air of heaven, which should be allowed to permeate and circulate freely through the apartment and through the house; air, *air*, AIR is the best disinfectant, curative, and preventive of scarlet fever in the world.

I could only wish that my *treatment of scarlet fever* were, in all its integrity, more generally adopted; if it were, I am quite sure that thousands of children would annually be saved from broken health and from death. Time still further convinces me that my treatment is based on truth, as I have every year additional proofs of its value and of its success, but error and prejudice are unfortunately ever at work, striving all they can to defeat truth and common sense. One of my principal remedies in the treatment of scarlet fever is an abundance of fresh air, but many people prefer their own inventions to God's grand and yet simple remedies—they pretend that they know better than the Mighty Framer of the universe.

Chicken-pox is occasionally, but not always, ushered in with a slight shivering fit; the eruption

shows itself in about twenty-four hours from the child first appearing poorly. It is a vesicular* disease. The eruption comes out in the form of small pimples, and principally attacks the scalp, the neck, the back, the chest and the shoulders, but rarely the face, while in small-pox the face is generally the part most affected. The next day these pimples fill with water, and thus become vesicles; on the third day they are at maturity. The vesicles are quite separate and distinct from each other. There is a slight redness around each of them. Fresh ones make their appearance while the others are dying away. Chicken-pox is usually attended with a slight itching of the skin; when the vesicles are scratched the fluid escapes, and leaves hard, pearl-like substances, which, in a few days disappear. Chicken-pox never leaves pit marks behind. It is a child's complaint; adults scarcely ever have it.

It is not at all dangerous, but, on the contrary, a trivial complaint. It lasts only a few days, and requires but little medicine. The patient ought to keep the house for three or four days, and should abstain from animal food. On the sixth day, but not until then, a dose or two of a mild aperient is all that will be required.

Is chicken-pox infectious?—There is a diversity of opinion on this head, but one thing is certain—it cannot be communicated by inoculation.

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* *Vesicles.* Small elevations of the cuticle, covering a fluid which is generally clear and colorless at first, but becomes afterward whitish and opaque or nearly so.—*Watson.*

Is whooping-cough an inflammatory disease?—Whooping-cough in itself is not inflammatory; it is purely spasmodic, but it is generally accompanied with more or less of bronchitis—inflammation of the mucous membrane of the bronchial tubes.

Whooping-cough is emphatically a disease of the young; it is rare for adults to have it; if they do, they usually suffer more severely than children. A child seldom has it but once in his life. It is highly contagious, and therefore frequently runs through a whole family of children, giving much annoyance, anxiety and trouble to the mother and the nurses; hence whooping-cough is much dreaded by them. It is amenable to treatment. Spring and summer are the best seasons of the year for the disease to occur. This complaint usually lasts from six to twelve weeks—sometimes for a much longer period, more especially if proper means are not employed to relieve it.

Whooping-cough commences as a common cold and cough. The cough, for ten days or a fortnight, increases in intensity; at about which time it puts on the characteristic "whoop." The attack of cough comes on in paroxysms. In a paroxysm, the child coughs so long and so violently, and *expires* so much air from the lungs without *inspiring* any, that at times he appears nearly suffocated and exhausted; the veins of his neck swell; his eyes, with the tremendous exertions, almost seem to start from their sockets; at length

there is a sudden *inspiration* of air through the contracted chink of the upper part of the windpipe—the glottis—causing the peculiar "whoop;" and after a little more coughing he brings up some glairy mucus from the chest; and sometimes food from the stomach by vomiting. This relieves him until the next paroxysm occurs, when the same process is repeated, the child during the intervals appearing quite well, and after the cough is over instantly returning either to his play or to his food. Generally, after a paroxysm he is hungry, unless, indeed, there is severe inflammation of the chest or the lungs. Sickness, as I before remarked, frequently accompanies whooping-cough; when it does, it may be looked upon as a good sign. The child usually knows when an attack is coming on; he dreads it, and therefore tries to prevent it; he sometimes partially succeeds; but if he does, it only makes the attack more severe when it does come. All causes of irritation and excitement ought to be avoided, as passion is apt to bring on a severe paroxysm.

A new-born babe—an infant of one or two months old—commonly escapes the infection; but if he catches whooping-cough at that tender age unfortunately it is likely to fare harder with him than if he were older—the younger the child the greater the risk. Still, in such a case, do not despair; I have known numerous instances of new-born infants, with judicious care, recovering perfectly from the attack, and thriving after it as though nothing of the kind had ever happened.

A new-born babe, laboring under whooping-cough, is liable to convulsions, which is in this disease the great source of danger. A child who is teething and laboring under the disease, is also liable to convulsions. When the patient is convalescing, care ought to be taken that he does not catch cold, or the "whoop" might return. Whooping-cough may either precede, attend or follow an attack of measles.

Treatment of whooping-cough.—We will divide the whooping-cough into three stages, and treat each stage separately.

What to do.—In the first stage, the commencement of whooping-cough, for the first ten days give the following prescription:

Take of Fluid Extract of Belladonnae, thirty drops;
Tincture Opii Camp., one ounce;
Syrup of Aurantii, two ounces.

Mix.—Give from four to eight teaspoonfuls in twenty-four hours, to a child three years old.

If the child is not weaned, keep him entirely to the breast; if he is weaned, to a milk and farinaceous diet. Confine him for the first ten days to the house, more especially if the whooping-cough is attended, as it usually is, with more or less bronchitis. But take care that the rooms are well ventilated, for good air is essential to the cure. If the bronchitis attending the whooping-cough is severe, confine him to his bed, and treat him as though it were simply a case of bronchitis.*

*For the treatment of bronchitis, see page 412.

In the second stage, discontinue the above and give nitric acid—which I have found to be an efficacious and valuable remedy in whooping-cough :

Take of—Diluted Nitric Acid, two drams;
Compound Tincture of Cardamoms, half a dram;
Simple Syrup, three ounces;
Water, two ounces and a half.

Make a mixture.—One or two teaspoonfuls, or a tablespoonful, according to the age of the child—one teaspoonful for an infant of six months, and two teaspoonfuls for a child of twelve months, and one tablespoonful for a child of two years, every four hours, first shaking the bottle.

Let the spine and chest be well rubbed every night and morning with the following stimulating liniment (first shaking the bottle) :

Take of—Oil of Cloves, one dram;
Oil of Amber, two drams;
Camphorated Oil, nine drams.

Make a liniment.

Let him wear a broad band of new flannel, which should extend around from his chest to his back, and which ought to be changed every night and morning, in order that it may be dried before putting on again. To keep it in its place it should be fastened by means of tapes and shoulder straps.

The diet ought now to be improved—he should gradually return to his usual food; and, weather permitting, should almost live in the open air—fresh air being one of the finest medicines.

In the third stage, that is, when the complaint has lasted a month, there is nothing like change of

air to a high, dry, healthy country place. Continue the use of Nitric Acid Mixture and liniment, and let him almost live in the open air, and be sure he does not discontinue wearing the flannel until he is quite cured, and then leave it off by degrees.

If the whooping-cough has caused debility, give him Cod-liver Oil—a teaspoonful twice or three times a day, giving it on a full stomach, after his meals. Remember that after the first three or four weeks change of air, and plenty of it, is for whooping-cough the grand remedy.

What NOT *to do.*—Do not apply leeches to the chest, for I would rather put blood into a child laboring under whooping-cough than to take it out of him—whooping-cough is quite weakening enough to the system of itself without robbing him of his life's blood; do not, on any account whatever, administer either emetic tartar or antimonial wine; do not dose him with quack medicine; do not give him stimulants, but rather give him plenty of nourishment, such as milk and farinaceous food, but *no* stimulants; do not be afraid, after the first week or two, of his having fresh air, and plenty of it—for fresh, pure air is the grand remedy, after all that can be said and done, in whooping-cough. Although occasionally we find that, if the child is laboring under whooping-cough, and is breathing a pure country air, and is not getting well so rapidly as we could wish, change of air to a smoky, gas-laden town will sometimes quickly effect a cure; indeed, some persons go so far as to say that

the *best* remedy for an *obstinate* case of whooping-cough is, for the child to live, the great part of every day, in gas works.

During a paroxysm of whooping-cough, if the child is old enough, let him stand up; but if he is either too young or too feeble, raise his head, and bend his body a little forward; then support his back with one hand, and the forehead with the other. Let the mucus be wiped out of his mouth with a soft handkerchief the moment it is within reach.

A chill is to be looked upon as an important symptom. Nearly all *serious* illness commences with a chill; severe colds, influenza, inflammations of different organs, scarlet fever, measles, small-pox and very many other diseases, begin in this way. If your child should ever have a chill, *instantly* send for a doctor, as delay might be dangerous. A few hours of judicious treatment, at the commencement of an illness, is frequently of more avail than days and weeks, nay months of treatment, when disease has gained a firm footing. A *serious* disease often steals on insidiously, and we have perhaps only a slight chill to tell us of its approach.

A *trifling* ailment, too, by neglecting the premonitory symptom, which at first might only be indicated by a *slight* shivering fit, will sometimes become a *mortal* disorder.

In case of a chill, *instantly* have the bed warmed, and put the child to bed. Apply at once a hot

water bottle or a hot brick, wrapped in flannel, to the soles of his feet. Put an extra blanket on his bed, and give him a cup of hot tea. As soon as the shivering is over, and he has become hot, gradually lessen the *extra* quantity of clothes on his bed, and take away the hot bottle or hot brick from his feet.

What NOT *to do.*—Do not give either brandy or wine, as inflammation of some organ might be about taking place. Do not administer laxative medicine, as there might be an eruption coming out on the skin, and an aperient would probably check it.

The mumps.—An inflammation of the parotid gland is most commonly ushered in with a light feverish attack. After a short time, a swelling, of stony hardness, is noticed before and under the ear, which swelling extends along the neck toward the chin. This lump is exceedingly painful, and continues painful and swollen for four or five days, at the end of which time it gradually disappears, leaving not a trace behind. The swelling of mumps never gathers. It may affect one or both sides of the face. It seldom occurs but once in a lifetime. It is contagious, and has been known to run through a whole family or school; but it is not dangerous unless it leaves the parotid gland, which is rarely the case, and migrates to the head, the breast, or testicles.

The treatment.—Foment the swelling, four or five times a day, with a flannel wrung out of hot

camomile and hops in equal parts, and apply every night a bran and oatmeal poultice to the swollen gland or glands. Debar the little patient from taking meat and broth for a few days, and let him live on bread and milk, light puddings, and arrow-root. Keep him in a well ventilated room, and shut him out from the company of his brothers, his sisters and young companions. Give him a little mild aperient medicine. Of course, if there is the slightest symptom of migration to any other part or parts, instantly call in a doctor.

Treatment of a boil.—One of the best applications is a Burgundy-pitch plaster spread on a soft piece of wash-leather. Let a druggist spread a plaster, about the size of the hand; and from this piece cut small plasters, the size of a twenty-five cent piece or larger (according to the dimensions of the boil), which snip around and apply to the part. Put a fresh one on daily. This plaster will soon cause the boil to break; when it does break squeeze out the contents and apply one of the plasters as before, which renew every day, until the boil is well.

The old fashioned remedy for a boil—common yellow soap and brown sugar,—is a capital one for the purpose. It is made with equal parts of brown sugar and shredded yellow soap, mixed by means of a table knife on a plate, with a few drops of water, until it is all well blended together, and of the consistence of thick paste; it should then be spread on a piece of wash-leather, or on thick

linen, and applied to the boil, and kept in its place by means of a bandage or a folded handkerchief, and should be renewed once or twice a day. This is an excellent application for a boil—soothing, comforting, and drawing—and will soon effect a cure. A paste of honey and flour, spread on linen, is another popular and good application for a boil.

If the boil should arise from a delicate state of health, give the child cod-liver oil, meat once a day, and an abundance of milk and farinaceous food. Let him have plenty of fresh air, exercise, and play.

If the boils should arise from gross and improper feeding, then keep him for a time from meat, and let him live principally on farinaceous food.

If the child is fat and gross, cod-liver oil will be improper; a mild aperient, such as rhubarb and magnesia, would then be the best medicine.

Symptoms of earache.—A young child screaming shrilly, violently, and continuously, is oftentimes owing to earache; carefully examine each ear, and ascertain if there is any discharge; if there is, the mystery is explained.

Remedy for earache.—Apply to the ear a small flannel bag, filled with hot salt—as hot as can be comfortably borne, or foment the ear with a flannel wrung out with a decoction of hot camomile and hops. A roasted onion, inclosed in muslin applied to the ear, is an old fashioned and favorite remedy, and may be tried if the bag of hot salt, or the fo-

mentation does not relieve. Put into the ear, but not very far, a small piece of cotton wool, moistened with warm olive oil. Take care that the wool is always removed before a fresh piece is substituted, as, if allowed to remain in any length of time, it may produce a discharge from the ear. Avoid all *cold* applications. If the earache is severe, keep the little fellow at home, in a room of equal temperature, but well ventilated, and give him no meat for a day or two.

If a discharge from the ear should either accompany or follow the earache, *more especially if the discharge is offensive*, instantly call in a doctor, or deafness for life may be the result. A knitted or crocheted hat, with woolen rosettes over the ears, is an excellent winter hat for a child subject to earache.

Causes and the treatment of discharges from the ear.—Cold, measles, scarlet fever, healing up of breakings out behind the ear; pellets of cotton wool, which had been put in the ear and forgotten, are the usual causes of discharges from the ear. It generally commences with earache.

The *treatment* consists in keeping the parts clean, by syringing the ear every morning with warm water, by attention to food—keeping the child principally upon a milk and farinaceous diet, and by change of air. If change of air is not practicable, great attention should be paid to ventilation. As I have before advised, in all cases of discharge from the ear call in a physician, as a

little judicious medicine is advisable—indeed, essential—and it may be necessary to syringe the ear with lotions, instead of with warm water, and, of course, it is only a doctor who has actually seen the patient who can decide these matters, and what is best to be done in each case.

Treatment of a "stye" on the eyelid.—Bathe the eye frequently with warm milk and water, and apply every night at bedtime, a warm white bread poultice. No medicine is required, but if the child is gross, keep him for a few days from meat, and let him live on bread and milk and farinaceous puddings.

A sure remedy for a "stye" is as follows:

Take of—Potas Iodide, eighty grains;
Potas Chlorate, five grains;
Aqua Rosa, one ounce.

Mix.—Put five or six drops in the eye four or five times a day, and occasionally bathe the stye with the same.

Large bowels.—It ought to be borne in mind that the bowels of a child are larger in proportion than those of an adult. But, if they are actually larger than they ought to be, rub them well for a quarter of an hour at a time night and morning, with soap liniment, and then apply a broad flannel belt. A broad flannel belt worn night and day, firm but not tight, is very serviceable. The child ought to be prevented from drinking as much as he has been in the habit of doing; let him be encouraged to exercise much in the open air, and let strict regard be paid to his diet.

Aperients for a child.—If it is *actually* necessary to give him physic, one or two teaspoonfuls of Syrup of Senna, repeated, if necessary, in four hours, will generally answer the purpose. Compound Confection of Senna is another excellent aperient for the young, it being mild in its operation, and pleasant to take; a child fancying it is nothing more than jam, and which it much resembles, both in appearance and in taste. The dose is half a teaspoonful early in the morning occasionally. Senna is an admirable aperient for a child, and is a safe one, which is more than can be said of many others. It is worthy of note that the taste of senna may be concealed by sweetening the infusion, adding milk, and drinking as ordinary tea, which it much resembles when thus prepared. Honey, too, is a nice aperient for a child—a teaspoonful ought to be given either by itself, or spread on a slice of bread.

Fluid Magnesia—Solution of Carbonate of Magnesia—is a good aperient for a child, and, as it has very little taste, is readily given, more especially if made palatable by the addition of a little syrup or of brown sugar. The advantages which it has over the solid form are, that it is colorless and nearly tasteless, and never forms concretions in the bowels, as the *solid* magnesia sometimes does if persevered in for any length of time. A child of two or three years old may take one or two tablespoonfuls of the fluid, either by itself or in his food, repeating it every four hours until the

bowels are open. When the child is old enough to drink the draught off *immediately*, the addition of one or two teaspoonfuls of lemon juice to each dose of the fluid magnesia, makes a pleasant effervescing draught, and increases its efficacy as an aperient.

Graham bread and molasses will frequently open the bowels, and as the latter is wholesome, it may be substituted for butter when the bowels are inclined to be costive. A roasted apple, eaten with *raw* sugar, is another excellent mild aperient for a child. Milk gruel—that is milk thickened with oatmeal—forms an excellent food, and often keeps the bowels regular, and thus (*which is an important consideration*) supersedes the necessity of giving an aperient. An orange or a fig after dinner, or a few Muscatel raisins, will frequently regulate the bowels.

Stewed prunes is another admirable remedy for the costiveness of a child. The manner of stewing them is as follows: Put a pound of prunes in a brown jar, add two tablespoonfuls of sugar, and cover with cold water, place them in the oven, and stew for four hours. A child should eat half a dozen or a dozen of them every morning until the bowels are relieved, taking care that he does not swallow the stones. Stewed prunes may be given in treacle—treacle increasing the aperient properties of the prunes.

A suppository is a mild and ready way of opening the bowels of a child. When he is two

or three years old and upward, a *candle* suppository is better than a *soap* suppository. Prepare as follows: Cut a piece of dip-tallow candle —the length of three inches—and insert it as you would a clyster pipe, about two inches up the fundament, allowing the remaining inch to be in sight, and there let the suppository remain until the bowels are opened.

Another excellent method of opening a child's bowels is by means of an enema of warm water—from half a teacupful to a teacupful, or even more, according to the age of the child. I cannot speak too highly of this plan as a remedy for constipation, as in the generality of cases it entirely prevents the necessity of administering a particle of aperient medicine. This fact stamps it as a most valuable remedy—physic being, as a rule, very objectionable, and injurious to the child's bowels. Bear this fact in mind, and let it be always remembered.

A wet compress to the bowels will frequently open them, and will thus do away with the necessity of giving an aperient—*a most important consideration.* Fold a napkin in six thicknesses, soak it in *cold* water, and apply it to the bowels, over which put either a thin covering or sheet of oil-cloth, or a piece of oil-silk; keep it in its place with a broad flannel roller, and let it remain on the bowels for three or four hours, or until they are opened.

Try what diet will do, as opening the bowels

by a regulated diet is far preferable to the giving of aperients. Let him have Graham bread, or pure oatmeal made into gruel with new milk. Let him eat stewed prunes, stewed rhubarb, roasted apples, strawberries, the inside of grapes and gooseberries, figs, etc. Give him early every morning a draught of *cold* water.

Let me again urge you *not* to give aperients in these cases, or in any case, unless you are absolutely compelled. By following my advice you will save yourself an immense deal of trouble, and your child a long catalogue of misery. Again, I say, look well into the matter, and whenever it is practicable avoid purgatives.

Protrusion of the lower bowel is due to the common and reprehensible practice of a parent administering frequent aperients to her child. Another cause, is allowing him to remain for a quarter of an hour or more at a time on his chair; this induces him to strain, and to force the bowel down.

The best manner of returning the bowel is to lay the child upon the bed on his face and bowels, with his hips a little raised, then smear lard on the forefinger of your right hand (taking care that the nail is cut loose), and gently press the bowel into its proper place with the forefinger. Remember, if the above methods are observed, you cannot do the slightest injury to the bowel; and the sooner it is returned the better it will be for the child, for if the bowel is allowed to remain long down, it may slough or mortify, and death

may ensue. After each motion the nurse must see that the bowel does not come down, and if it does, she ought instantly to return it. The nurse should also be careful *not* to allow the child to remain on his chair more than two or three minutes at a time.

Another excellent remedy for the protrusion of the bowel, is to use every morning a cold salt and water sitz bath. There need not be more than a depth of three inches of water in the bath; a small handful of table salt should be dissolved in the water. A dash of warm water in the winter time must be added, to take off the extreme chill, and the child ought not to be allowed to sit in the bath for more than one minute, or while the mother can count a hundred, taking care to throw either a square of flannel or a small shawl over his shoulders. The sitz bath ought to be continued for months, or until the complaint is removed. I cannot speak in too high praise of these baths.

In administering medicine to a child, if he is old enough, appeal to his reason. If a mother endeavors to deceive her child, and he detects it, he will for the future suspect her. If he is too young to be reasoned with, and will not take medicine, then he must be compelled. Lay him across your knees, tightly hold both his hands and his nose, then, by means of the medicine spoon, pour the medicine down his throat, and he will be obliged to swallow it.

It may be said that this is a cruel procedure,

but it is the only way to compel an unruly child to take physic, and is much less cruel than running the risk of his dying for want of the medicine.

A sick child ought not to be roused from his sleep to give him medicine, as sleep, being a natural restorative, must not be interfered with. A mother cannot be too particular in administering the medicine, at stated periods, while he is awake.

If a child wets his bed while asleep, let him be held out just before he goes to bed, and again when the family retires to rest. If he is asleep at the time, he will become so accustomed to it that he will urinate without awaking. He ought to be made to lie on his side; for if put on his back the urine will rest upon an irritable part of the bladder, and if inclined to wet his bed he will not be able to avoid doing so. He must not be allowed to drink much with his meals, especially with his supper. Wetting the bed is an infirmity with some children—they cannot help it. It is, therefore, cruel to scold and chastise them for it. Occasionally wetting the bed arises from idleness; in which case a little wholesome correction may be necessary. Water-proof bed sheeting—one yard by three-quarters of a yard—will effectually preserve the bed, and ought always on these occasions to be used.

A mother ought, every morning, to ascertain for herself whether a child has wet his bed; if he has, and if the water-proof cloth has not been used, the mattress, sheets and blankets must be in-

stantly taken to the kitchen fire and be properly dried. Inattention to the above has frequently caused a child to suffer from cold, a fever, or an inflammation; not only so, but if they are not dried he is wallowing in filth, and in an offensive effluvium. If both mother and nurse were more attentive to their duties—in frequently holding a child out, wetting the bed would be the exception, and not, as it frequently is, the rule. If a child is dirty, you may depend upon it, the right persons to blame are the mother and the nurse, and not the child.

Chilblains and the way to prevent them.—Let a child who is subject to them, wear in the winter time, a square piece of wash leather over the toes, a pair of warm lamb's wool stockings, and good shoes; but above all, let him be encouraged to run about the house as much as possible, especially before going to bed; and on no account allow him to warm his feet before the fire, or to bathe them in *hot* water. If the feet are cold, and the child too young to take exercise, then let them be well rubbed with the warm hand. If adults suffer from chilblains, I have found friction, night and morning, with horse hair flesh gloves, the best means of preventing them.

Secondly, the way to cure them.—If they are unbroken, the old fashioned remedy of onion and salt is one of the best of remedies. Cut an onion in two, take one-half of it, dip it in table salt and rub the chilblain with it for two or three minutes.

The onion and salt is a famous remedy to relieve that intolerable itching which sometimes accompanies chilblains; then let them be covered with a piece of lint, over which a piece of wash leather should be placed.

If they are broken, let a piece of lint be spread with spermaceti cerate, and applied every morning to the part, and use a white bread poultice every night.

Chapped hands.—Tie a teacupful of bran in a muslin bag, and put over night into a large water can or jug of *rain* water. Use this water to wash with on the following morning, and every morning until the chaps are cured. As often as water is withdrawn from the water can or jug, refill with fresh rain water, in order that the bran may be constantly soaking in it. The bran in the bag should be renewed about twice a week.

Take particular care to dry the skin well every time he is washed; then, as well as every night at bedtime, rub a piece of deer's suet over the parts affected; a few dressings will perform a cure. The deer's suet may be bought at any of the shops where venison is sold. Another excellent remedy is glycerine, which should be smeared, by means of the finger or a camel's hair brush two or three times a day on the parts affected. If the child is very young, it may be necessary to dilute the glycerine with rose water; fill a small bottle one-third with glycerine, and fill up the remaining two-thirds of the bottle with rose water—shaking

the bottle every time just before using it. The best soap to use for chapped hands is the glycerine soap.

Chapped lips.—Cold cream (which may be procured of any druggist) is an excellent application for *chapped lips.* It ought to be frequently smeared on the parts affected.

The different varieties of worms that infest a child's bowels, are the tape-worm ; the long round-worm ; and the most frequent of all, the common thread or maw-worm. The tape-worm infests the whole course of the bowels, both small and large; the long round worm, principally the small bowels, occasionally the stomach; it sometimes crawls out of the child's mouth, causing alarm to the mother ; there is no danger in its doing so ; the common thread-worm or maw-worm infests the rectum or fundament.

The causes of worms are: Weak bowels, bad and improper food, such as unripe, unsound, or uncooked fruit, and much green vegetables ; pork, especially underdone pork ;* and abundance of sweets ; the want of salt in the food.

The symptoms of worms are—emaciation ; itching and picking of the nose ; a dark mark

*One frequent, if not the most frequent, cause of tape-worm is the eating of pork, more especially if it is not well cooked. *Underdone* pork is the most unwholesome food that can be eaten, and the most frequent cause of tape-worm known. Rare beef also gives tape-worm; let the meat, therefore, be well and properly cooked. These facts ought to be borne in mind, as prevention is always better than cure.

under the eyes; grating of the teeth during sleep, starting in the sleep; foul breath; furred tongue; uncertain appetite—sometimes voracious, at other times bad, the little patient sitting down very hungry to his dinner, and before scarcely tasting a mouthful, the appetite vanishing; large bowels; colicky pains of the bowels, slimy motions; itching of the fundament. Tape-worm and round-worm, more especially the former, are apt to produce convulsions in children. Tape-worm is very weakening to the constitution, and usually causes great emaciation and general ill health; the sooner it is expelled from the bowels the better it will be for the patient.

Many of the obscure diseases of children arise from worms. In all doubtful cases this fact should be borne in mind, in order that a thorough investigation may be instituted.

Let me caution a mother never to give her child patent medicines for the destruction of worms. There is one favorite quack powder, which is composed principally of large doses of calomel, and which is quite as likely to destroy the patient as the worms. No, if your child has worms, put him under the care of a judicious physician, who will soon expel them, without, at the same time, injuring health or constitution.

Worms generally infest *weak* bowels, hence the moment a child becomes strong, worms cease to exist. The reason why a child is so subject to them is owing to the improper food which is

usually given to him. When he is stuffed with unsound and with unripe fruits, with much sweets, with rich puddings, and with pastry, and when he is oftentimes allowed to eat his meat *without* salt, and to *bolt* his food without chewing it, is there any wonder that he should suffer with worms? The way to prevent them is to avoid such things, and, at the same time, to give him plenty of salt to his *fresh* and well-cooked meat. Salt strengthens and assists digestion, and is absolutely necessary to the human economy. Salt is most emphatically a worm destroyer. The truth of this statement may be readily tested by sprinkling a little salt on a common earth-worm. Look well to it, therefore, ye mothers, and beware of the consequences of neglecting such advice, and see for yourselves that your children regularly eat salt with their food. If they neglect eating salt with their food, they *must of necessity have worms*, and worms that will eventually injure them, and make them miserable. All food should be flavored with salt; *flavored*, that is, salt should be used in each and every kind of food—*not used in excess but in moderation.*

If a child is subject to a scabby eruption about the mouth, leave it to nature. Do not, on any account, use any local application to heal it; if you do, you may produce injury; you may either bring on an attack of inflammation, or you may throw him into convulsions. This breaking out is frequently a safety-valve, and must not be needlessly

interfered with. Should the eruption be severe, reduce the child's diet, keep him from butter, from gravy, and from fat meat, or from meat altogether for a few days, and give him mild aperient medicine.

Milk crust is a complaint of very young children —of those who are cutting their teeth—and, as it is a nasty looking complaint, and frequently gives a mother a great deal of trouble, or anxiety and annoyance, it will be well that you should know its symptoms, its causes, and its probable duration.

Symptoms.—When a child is about nine months or a year old, small pimples are apt to break out around the ears, on the forehead, and on the head. These pimples at length become vesicles (that is they contain water), which run into one large one, break, and form a nasty, dirty-looking, yellowish, and sometimes greenish, scab, which scab is moist, or sometimes quite wet, and gives out a disagreeable odor, and which is sometimes so large on the head as actually to form a skull cap, and so extensive on the face as to form a mask. These I am happy to say, are rare cases. The child's beauty is for a time completely destroyed, and not only his beauty, but his good temper, for as the eruption causes great irritation and itching, he is constantly clawing himself, and crying with annoyance the great part of the day, and sometimes of the night —the eruption preventing him from sleeping. It is not contagious, and soon after he has cut the whole of his *first* set of teeth it will get well, pro-

viding it has not been improperly interfered with.

Causes.—Irritation from teething, stuffing him with over-much meat, thus producing a humor, which Nature tries to get rid of by throwing it out on the surface of the body, the safest place she could fix on for the purpose, hence the folly and danger of giving medicines and applying *external* applications to drive the eruption in. Diseased nature oftentimes breaks forth in strange eruptions, and cures herself in this way, if she is not too much interfered with, and if the eruption is not driven in by injudicious treatment. I have known in such cases disastrous consequences to follow over-officiousness and meddlesomeness. Nature is trying all she can to drive the humor out, while some wiseacres are doing all they can to drive the humor in.

Duration.—As milk crust is a tedious affair, and will require a variety of treatment, it will be necessary to consult an experienced doctor, and although he will be able to afford great relief, the child will not, in all probability, be quite free from the eruption until he has cut the whole of his first set of teeth—until he is upward of two years and a half old—when, with judicious and careful treatment, it will gradually disappear, and eventually leave not a trace behind.

It will be far better to leave the case alone—to get well of itself—rather than to try to cure the complaint either by outward applications or by strong internal medicines. The remedy is often worse than the disease; of this I am perfectly convinced.

In consulting a doctor give him your entire confidence. Be truthful and be candid with him. Tell him the truth, the whole truth, and nothing but the truth. Have no reservations; give him, as near as you can, a plain, unvarnished statement of the symptoms of the disease. Do not magnify, and do not make too light of any of them. Be prepared to state the exact time the child first showed symptoms of illness. If he has had a shivering fit, however slight, do not fail to tell your physician of it. Note the state of the skin; if there is a breaking out—be it ever so trifling—let it be pointed out to him. Make yourself acquainted with the quantity and the appearance of the urine, taking care to have a little of it saved, in case the doctor may wish to see and examine it. Take notice of the state of the motions—their number during the twenty-four hours, their color, their smell, and their consistence, keeping one for his inspection. Never leave any of these questions to be answered by a servant; a mother is the proper person to give the necessary and truthful answers, which answers frequently decide the fate of the patient. Bear in mind, then, the mother's untiring care and love, attention and truthfulness, frequently decide whether, in a serious illness, the child shall live or die.

A doctor has arduous duties to perform; smooth, therefore, his path as much as you can, and you will be amply repaid by the increasing good he will be able to do your child. Strictly

obey the doctor's orders—in diet, in medicine, in everything. Never throw obstacles in his way. Never omit any of his suggestions; for, depend upon it, that if he is a sensible man, his directions, however slight, ought never to be neglected.

If the case is severe, requiring a second opinion, never call in a physician without first consulting and advising with your own doctor. It would be an act of great discourtesy to do so. Inattention to the foregoing advice has frequently caused injury to the patient, and heart burnings and ill will among doctors.

Warm baths are useful for convulsions, pains in the bowels, restlessness from teething, and flatulence. The warm bath acts as a fomentation to the stomach and bowels, and gives ease where the usual remedies do not rapidly relieve.

Carefully ascertain before he is immersed in the bath that the water is neither too hot nor cold. Carelessness, or over anxiety to put him in the water as quickly as possible, has frequently caused him great pain and suffering. From 96° to 98° Fahrenheit is the proper temperature of a warm bath. If it is necessary to add fresh warm water, let him be removed, or not put in when very hot; for if boiling water is added to increase the heat of the bath, it naturally ascends, and may scald him. Again, let the fresh water be put in at as great a distance from him as possible. The usual time for him to remain in the bath is a quarter of an hour or twenty minutes. Let the chest and

bowels be rubbed by the hand while he is in the bath. Let him be immersed in the bath as high up as the neck, taking care that he is supported under the arm-pits, and that his head is also rested. As soon as he comes out of the bath, he ought to be carefully but quickly rubbed dry, then put to bed. If the desired relief has been obtained he will fall into a sweet refreshing sleep.

When there is pain in the stomach or bowels, there is nothing which affords greater or quicker relief than the *external* application of heat. The following are the four different methods of applying heat: A flannel bag of hot salt applied to the stomach or the bowels, is an excellent remedy for these pains. A rubber hot water bottle,* half filled with hot water, applied to the stomach or bowels, will afford great comfort. Another excellent remedy for these cases is a hot bran poultice. To make this, stir bran into a vessel containing either a pint or more of boiling water, until it is of the consistence of a soft poultice, then put into a flannel bag and apply to the part affected. When cool, dip from time to time in *hot* water. In case a child has a feverish cold, especially if it is attended with pains in the bowels, a hot compress is a good external application. Take a yard of flannel, fold it in three widths, then dip it in very hot water, wring it out tolerably dry, and apply it

*Every house where there are children ought to have one of these rubber hot water bottles.

evenly and neatly round and round the bowels; over this, and to keep it in its place, put on a *dry* flannel bandage. If it is put on at bedtime, it ought to remain on all night. Where there are children, it is desirable to have the yard of flannel and the flannel bandage in readiness, and then a mother will be prepared for emergencies. Either of the above applications will usually afford great relief. There is one great advantage in the *external* application of heat—it can never do harm; if there is inflammation, it will do good; if cramps or spasms of the stomach, it will be serviceable; if colic, it will be one of the best remedies that can be used; if a feverish cold, it will throw the child into a perspiration, and prove beneficial.

It is well for a mother to know how to make a white bread poultice. Scald a basin, for you can never make a good poultice unless you have perfectly boiling water, then throw in coarsely crumbled bread, and cover with a plate. When the bread has soaked up as much water as it will imbibe, drain off the remaining water, and there will be a light pulp left. Spread it a third of an inch thick on folded linen, and apply. It may be said that this poultice will be very inconvenient if there is no lard in it, for it will soon get dry; but this is the very thing you want, and it can easily be moistened by dropping warm water on it, while a greasy poultice will be moist, but not wet.

Accidents.—If a child cuts his finger, there is nothing better than tying it up. Do not wash the

blood away, but apply the rag at once, taking care that no foreign substance is left in the wound. If there is either glass or dirt in it, it will be necessary to bathe the cut in warm water before the bandage is applied. Some mothers use turpentine on a fresh wound. This plan is cruel and unnecessary, and frequently makes the cut difficult to heal. If it bleeds immoderately, sponge the wound freely with cold water.

If a child receives a blow, causing a bruise, immediately smear a small lump of *fresh* butter on the part affected, and renew it every few minutes for two or three hours; this is an old fashioned, but a very good remedy. If *fresh* butter is not at hand olive oil may be used, or soak a piece of brown paper in one-third of French brandy and two-thirds of water, and immediately apply; when dry, renew it. Either of these simple plans will generally prevent both swelling and disfiguration.

A black eye.—For a blow over the eye there is no remedy superior to fresh butter. Well anoint the parts for two or three inches around the eye, renewing it every few minutes for the space of an hour or two; if well done the disagreeable appearance of a black eye will probably be prevented. Another capital remedy is the arnica lotion·

Take of—Tincture of Arnica, one ounce;
Water, seven ounces.

To make a lotion. Bathe the eye frequently by means of a soft piece of linen with this lotion, and between times, let a piece of linen wet in the lotion, be applied to the eye, and be fastened in its place by means of a bandage.

If a child falls upon his head and is stunned, he will look deadly pale, very much as if he had fainted. In a few minutes he will in all probability, regain his consciousness. Sickness frequently supervenes, which makes the case more serious, it being a proof that injury, more or less severe, has been done to the brain.

Immediately loosen his collar and tie, lay him flat on his back, sprinkle cold water upon his face, open the windows so as to admit plenty of fresh air, and do not let people crowd around, nor shout to make him speak.

While he is in an unconscious state, do not allow a drop of blood to be taken from him, either by leeches or from the arm; if you do, he will probably never rally, but will most likely sleep the sleep that knows no waking.

Accidental poisoning.—It is a frequent practice for a mother or nurse to leave *external* applications within the reach of a child. It is also highly improper to put a mixture and an *external* application on the same tray or on the same mantelpiece. Many liniments contain large quantities of opium, a teaspoonful of which would cause the death of a child. Hartshorn and oil has frequently been swallowed by children, and in several instances has caused death. Many lotions contain sugar of lead, which is also poisonous. There is not generally sufficient lead in the lotion to cause death; but there is enough to make the child very sick. All these accidents occur from disgraceful carelessness.

Before administering a dose of medicine to a child a mother or nurse ought *always* to read the label on the bottle. By adopting this simple plan many serious accidents and much after misery may be averted. Again, I say, let every lotion, every liniment, and indeed everything for *external* use, be locked up or put out of the way, and far away from all medicine that is given internally. *This advice admits of no exception.*

If your child has swallowed a portion of a liniment which contains opium, administer a strong mustard emetic (composed of two teaspoonfuls of flour of mustard, mixed with a half a teacupful of warm water). Encourage the vomiting by afterward forcing him to swallow warm water. Tickle the throat either with your finger or with a feather. Plunge him alternately in a hot and then in a cold bath. Dash cold water on his head and face. Throw open the windows. Walk him about in the open air. Rouse him by slapping him, by pinching him, and by shouting to him ; rouse him, indeed, by every means in your power, for if you allow him to go to sleep, it will, in all probability, be the sleep that knows no waking.

When a child has swallowed hartshorn and oil, force him to drink vinegar and water, lemon-juice and water sweetened with sugar, barley water, and thin gruel. If he has swallowed a lead lotion, give him a mustard emetic, and then vinegar and water, sweetened either with honey or with sugar, to drink.

Lucifer matches are very poisonous; it is therefore desirable that they should be put out of the reach of children. A mother ought to be very strict with servants on this head. Matches are not only poisonous but dangerous, as a child may set himself on fire with them.

If a child's clothes take fire, lay him on the floor, and roll him in the rug, in the carpet, or in any thick article you may have at hand; if it is woolen, so much the better, or roll him over and over on the floor; by excluding the air, the flame will go out. It is important that a mother should cultivate presence of mind. If parents were better prepared for such emergencies, such horrid disfigurations and frightful deaths would be less frequent. Burns are generally more serious than scalds. Burns and scalds are more dangerous on the body, especially on the chest, than either on the face or on the extremities. The younger the child, the greater the danger.

Scalds both of the mouth and throat, from a child drinking boiling water from the spout of a tea-kettle, are most dangerous. A poor person's child is sometimes shut up in the kitchen by himself, from the unavoidable absence of the mother, and being very thirsty, and no other water at hand, is tempted to drink from the tea-kettle.

The best immediate application to a scald or a burn is flour. It ought to be thickly applied over the part affected, and kept in place with a bandage, or with strips of old linen. If this is done, almost

instantaneous relief will be experienced, and the burn or scald, if superficial, will soon be well. The advantage of flour as a remedy is that it is always at hand. I have seen some extensive burns and scalds cured by the above simple plan. Equal parts of lime water and linseed oil make an excellent application for a burn or scald, and will prevent blistering if faithfully used at once.

Prepared lard—that is lard without salt*—is an admirable remedy for burns and scalds. The advantages of lard are: It is almost always at hand; is very cooling, soothing, and unirritating to the part, and gives almost immediate freedom from pain. It effectually protects and sheathes the burn or scald from the air. It is readily and easily applied; all that has to be done is to spread on pieces of old linen or on lint, and apply smoothly to the parts affected, keeping them in their places by means of bandages.

Cold applications, such as cold water, cold vinegar and water, and cold lotions, are most injurious, and in many cases, even dangerous. Scraped potatoes, sliced cucumber, salt, and spirits of turpentine, have all been recommended, but in my practice nothing has been so efficacious as the remedies above enumerated.

Do not wash the wound, and do not dress it more frequently than every *other* day. If there is

* If there is no other lard in the house but lard *with* salt, the salt may be readily removed by washing the lard in cold water. Prepared lard—lard *without* salt—can be procured from the nearest druggist in the neighborhood.

much discharge, absorb it with soft linen, but do not, *on any* account, let the burn be rubbed or roughly handled. I am convinced that, in the majority of cases, wounds are too frequently dressed, and that the washing of wounds prevents their healing.

After the first two days, if severe, the burn or the scald may require different dressings.

If the scald is either on the leg or foot, a common practice is to take the shoe and stocking off. In this operation the skin is also at the same time very apt to be removed. Both the shoe and the stocking ought to be slit and taken off, so that neither unnecessary pain nor mischief may be caused.

If a bit of quicklime should accidentally enter the eye of a child, instantly, but tenderly, either by means of a camel's hair brush, or by a small spill of paper remove any bit of lime that may adhere to the ball of the eye, or be in the eye, or on the eyelashes. Then well bathe the eye, using vinegar and water, one part of vinegar and three parts of water. Bathe the eye for at least a quarter of an hour. The vinegar will neutralize the lime, and will rob it of its burning properties.

Having bathed the eye with vinegar and water for a quarter of an hour, bathe it for another quarter of an hour with warm water, after which, drop into the eye two or three drops of the best sweet oil. An eye-shade made of three thicknesses of linen covered with green silk should be

worn until the eye has fully recovered. If the above rules are not *promptly* and *properly* followed the child may irreparably lose his eyesight.

The above accident is apt to occur to a child who is standing near a building when the slacking of quicklime is going on, and where portions of lime in the form of powder are flying about the air. It will be well not to allow a child to stand about such places, as prevention is always better than cure. *Quicklime* is sometimes called *caustic lime;* it well deserves its name, for it is a *burning lime*, and if the proper means are not promptly used, will soon burn away the sight.

If there is grit, sand, dust, a particle of coal, a gnat, a hair, or an eyelash in the eye, it ought to be tenderly removed by a small tightly folded paper spill, holding down the lower lid with the forefinger of the left hand; and the eye, if inflamed, should be frequently bathed with warm milk and water. Generally as soon as the cause is removed the effect will cease, and after treatment will be unnecessary. Any foreign substance, however minute, in the eye is very painful; but a piece of burning lime is excruciating.

Choking.—Often, a child fills his mouth full and swallows lumps of food in such haste as to choke.

Treatment.—Instantly put your finger into the throat and feel if the substance is within reach; if it is food, force it down, and thus liberate the breathing; should it be a hard substance, endeavor to hook it out; if you cannot reach it, give a good

smart blow or two with the flat of the hand on the back; or on the chest, taking care to seize the little patient, and place him between your knees sidewise, and in this or some other manner *compress the abdomen*, otherwise the blow will be lost by the yielding of the diaphragm and the respiratory effort will not be produced. If that does not have the desired effect, tickle the throat with your finger, so as to insure immediate vomiting, and subsequent ejection of the offending substance.

The bite of a dog or cat, especially the latter, is often venomous and difficult to heal. The best application is, to *immediately* cauterize the wound or wash the part with hartshorn, with a little water added, *then* apply a large hot white bread poultice to the part, and renew it every four hours. If there is much pain in the wound, foment the part, every time before applying the poultice, with a hot camomile and poppy-head fomentation. Scratches of a cat are best treated by freely smearing fresh butter on the part affected. If fresh butter is not at hand, fresh lard—lard *without* salt —will answer the purpose. If the pain of the scratch is intense, foment the part affected with hot water, then apply a hot white bread poultice, which should be frequently renewed.

In case of a sting from a bee or wasp, extract the sting, if left behind, by means of a pair of forceps, or by the pressure of the hollow of a small key—a watch key will answer the purpose, wash with hartshorn and water, *then* the blue-bag (which is

used in washing) moistened with water, should be applied to the part; or a few drops of solution of potash, or apply moist tobacco, rubbing it well in, and renew from time to time. If either of these are not at hand, either honey, treacle, or fresh butter, will answer the purpose. Should there be much swelling or inflammation, foment the part with hot water, and apply a hot bread poultice.

For abrasions of the skin, arnica court plaster will be found an excellent remedy. When wanted, cut a portion as large as may be requisite, moisten it with the tongue, in the same manner as you would a postage stamp, and apply it to the grazed part. It may be removed when necessary by simply wetting with water. The part in two or three days will be well.

In case a child swallows either laudanum, paregoric, Godfrey's Cordial, or any other preparation of opium, give, as *quickly as* possible, a strong mustard emetic. Mix two teaspoonfuls of flour of mustard in half a teacupful of water, and force it down his throat. If free vomiting is not induced, tickle the upper part of the throat with a feather, drench the little patient's stomach with large quantities of warm water. As soon as it can be obtained from a druggist, give the following emetic:

Take of—Sulphate of Zinc, one scruple;
Simple Syrup, one dram;
Distilled Water, seven drams.
To make a draught.

Slap his thighs and back; walk, lead or carry him about in the fresh air; shake him by the shoulders; pull his hair, tickle his nostrils; shout in his ears; plunge him into a warm bath and then into a cold one alternately; well sponge his head and face with cold water; dash cold water on his head, face and neck; and do not, on any account, until the effects of the opiates are gone, allow him to go to sleep; if you do, he will never wake.

If a child has put either a pea, bean, bead, cherry stone, or any other smooth substance, into his ear, turn his head on one side, in order to let the ear with the pea or bead in it be undermost, then give with the flat of your hand two or three sharp, sudden slaps or boxes on the other, or *uppermost* ear, and most likely the offending substance will drop out. Poking at the ear will, in the majority of cases, only send the substance further in, and make it more difficult to remove.

If an earwig, or any other living thing should get into the ear of a child, lay the child on his side, the affected ear being uppermost, and fill the ear, from a teaspoon, with either water or sweet oil. The water or oil will carry the insect out of the ear, and the child is at once relieved. Dr. B. F. Kinsley, U. S. A., relates a number of cases where soldiers sleeping on the plains have come to him to have bugs removed from their ears. Accidentally he discovered that by holding a lighted candle near the ear, the insects would at once leave the cavity and come forth. The patient should be in the dark when this is done.

If a child swallows a piece of broken glass, avoid purgatives, as the free action of the bowels would be likely to force the spiculæ of glass into the mucous membrane of the bowels, and thus would wound them, and might cause ulceration, and even death. The object of treatment will be to allow them to pass through the intestines well enveloped by other contents of the tube; and for the purpose a solid, farinaceous diet should be ordered, and purgatives scrupulously avoided. If a child swallows a pin, treat him as for broken glass. Give him no aperients, or it might, in action, force the pin into the bowel.

If a child swallows a coin of any kind, there is, as a rule, no danger. A dose or two of castor oil will be all that is usually necessary. The evacuations ought to be carefully examined until the coin is discovered. I once knew a child to swallow a penny piece and pass it in his stool.

A mother can usually prevent her child from having an accident, by strict supervision over him on her own part, and by not permitting the child to be left to the tender mercies of servants; by not allowing him to play with fire, to swing over banisters, and to have knives and playthings of a dangerous character; to keep all poisonous articles and cutting instruments out of his reach; and, above all, insisting, lovingly, affectionately, but firmly, upon implicit obedience. Accidents generally arise from one of three causes: Either from wilful disobedience, from gross carelessness,

or from downright folly. I quite agree with Davenant, that they do not arise from chance.

Remarks on the management of a sick room.—In sickness, select a large and lofty room; if in the town, the back of the house will be preferable—in order to keep the patient free from noise and bustle—as a sick chamber cannot be kept too quiet. Be sure that there is a chimney in the room—as there ought to be in *every* room in the house—and that it is not stopped, as it will help to carry off the impure air of the apartment. Keep the chamber *well ventilated*, by opening the window from time to time. The air of the apartment cannot be too pure; therefore, let the evacuations from the bowels be instantly removed, either to a distant part of the house, to an outhouse, or to the cellar, as it may be necessary to keep them for the physician's inspection.

Before using either the night-commode, or *the pot-de-chambre*, let a little water be put in the pan, or *chambre*, in order to sweeten the motion, and prevent the fæcal matter from adhering to the vessel. Let there be frequent change of linen, as in sickness it is even more necessary than in health. Especially is this true if the complaint is fever. In an attack of fever, clean sheets ought to be put on the bed every other day; clean body-linen every day. A frequent change of linen in sickness is most refreshing.

If the complaint is fever, a fire in the grate will not be necessary. Should it be a case of in-

flammation of the lungs or of the chest, a small fire in the winter time is desirable, keeping the temperature of the room as nearly as possible at 60° Fahrenheit. Bear in mind that a large fire in a sick room cannot be too strongly condemned; for if there is fever—and there are scarcely any complaints without—a large fire only increases it. Small fires encourage ventilation of the apartment, and thus carry off impure air. If it is summer time, fires would be improper. A thermometer is an indispensable requisite in a sick room.

In fever, free and thorough ventilation is of vital importance, more especially in scarlet fever; then a patient cannot have too much air. In scarlet fever, for the first few days, the windows, be it winter or summer, must be judiciously opened. The fear of the patient catching cold by doing so is one of the numerous prejudices and baseless fears that haunt the nursery, and the sooner it is exploded the better it will be for human life.

If it is a case of measles, it will be necessary to adopt a different course; then the windows ought not to be opened, but the door must from time to time be left ajar. In the case of measles, if it is winter time, a *small* fire in the room will be necessary. In inflammation of the lungs or of the chest, the windows should not be opened, but the door ought occasionally to be left unfastened, in order to change the air and make it pure. Remember that ventilation, either by open window or by open

door, is in all diseases most necessary. Ventilation is one of the best friends a doctor has.

In fever, do not load the bed with clothes; in the summer a sheet is sufficient, in winter a sheet and a blanket. In fever do not be afraid of allowing the patient plenty of cold water or cold toast and water; Nature will tell him when he has had enough. In measles, let the chill be taken off the toast and water. In *croup*, have always ready a plentiful supply of hot water, in case a warm bath is required. In *child-crowing*, have always in the sick room a supply of cold water, ready at a moment's notice to dash upon the face.

In fever, do not let the little patient lie on the lap; he will rest more comfortably on a hair mattress in his crib or cot. If he has pain in the bowels, the lap is most agreeable to him; the warmth of the body, either of the mother or of the nurse, soothes him; besides, if he is on the lap, he can be turned on his stomach and on his bowels, which often affords him great relief and comfort. If he is much emaciated, when he is nursed, place a pillow upon the lap and let him lie upon it.

In head affections, darken the room with a *green* blind; keep the chamber more than usually quiet; let what little talking is necessary be carried on in whispers, but the less of that the better; and in *head affections*, never allow smelling salts to be applied to the nose, as they only increase the flow of blood to the head, and consequently do harm.

It is often a good sign for a child, who is seriously ill, to suddenly become cross. It is then he begins to feel his weakness and to give vent to his feelings. Children are almost always cross when recovering from an illness, however patient they may have been during its severest moments, and the phenomenon is not by any means confined to children.

A sick child must *not* be stuffed with *much* food at a time. He will take a tablespoonful of new milk or a tablespoonful of chicken broth every half hour with greater advantage than a teacupful of one or the other every four hours. The large quantity would probably be rejected from his stomach, and may cause the unfortunately treated child to die of starvation. If a sick child is peevish, attract his attention by a toy or an ornament; if he is cross, win him over to good humor by love, affection, and caresses, but let it be done gently and without noise. Do not let visitors see him; they will only excite, distract, and irritate him, and help to consume the oxygen of the atmosphere, and thus rob the air of its exhilarating health-giving qualities and purity; a sick room, therefore, is not a proper place, either for visitors or for gossips.

In selecting a sick nurse, let her be gentle, patient, cheerful, quiet, and kind, but firm withal. She ought to be neither old nor young. If she is old she is often garrulous and prejudiced, and thinks too much of her trouble; if she is young,

she is frequently thoughtless and noisy; therefore choose a middle-aged woman. In the sick room do not let there be more than one efficient nurse besides the mother. A greater number can be of no service—they will only be in each other's way, and will distract the patient.

Let stillness reign in a sick room. Creaking shoes and rustling silk dresses ought not to be worn in sick chambers—they are quite out of place there. If the child is asleep, or if he is dozing, perfect stillness must be enjoined, not even a whisper should be heard.

If there are other children, let them be removed to a distant part of the house; or, if the disease is of an infectious nature, send them away from home altogether.

In an illness—and bear in mind the following is most important advice—a child must be encouraged to try and urinate, whether he asks or not, at least four times during the twenty-four hours; and at any other time, if he express the slightest indication to do so. I have known a little fellow to hold his urine to his great detriment, for twelve hours, because either the mother had forgotten to inquire, or the child was too ill or too indolent to make the attempt.

See that the doctor's directions are carried out to the very letter. Do not fancy that you know better than he does, otherwise you have no business to employ him. Let him have your implicit confidence and your exact obedience. What you

may consider to be a trifling matter, may frequently be of the utmost importance, and may sometimes decide whether the case shall end in life or death.

Every mother should have a general idea of what the pulse of children of different ages should be in health and in disease. Every person should know how to ascertain the state of the pulse in health ; then, by comparing it with what it is when he is ailing, he may have some idea of the urgency of his case. Parents should know the healthy pulse of each child, since now and then a person is born with a peculiarly slow or fast pulse, and the very case in hand may be of such peculiarity. An infant's pulse is 140, a child of seven about 80, and from 20 to 60 years it is 70 beats a minute, declining to 60 at fourscore. At 60, if the pulse always exceeds 70, there is a disease; the machine working itself out, there is a fever or inflammation somewhere, and the body is feeding on itself, as in consumption, when the pulse is quick.

CHAPTER XIV.

YOUTH.

Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood fleet.
—LONGFELLOW.

Bathing.—Thorough ablution of the body every morning at least, is essential to health. I maintain that no one can be in the enjoyment of perfect health who does not keep the whole of the skin clean. In the absence of cleanliness, a pellicle forms on the skin which engenders disease. A person who does not keep his skin clean is more susceptible to contagious disease, such as small-pox, typhus fever, cholera, diphtheria, scarlet fever, etc. Besides, ablution is a delightful process; it makes one feel fresh, sweet, young and healthy; it makes the young look handsome, and the old look young. Thorough ablution may truly be said both to renovate and to rejuvenize. A scrupulously clean skin is one of the grand distinctive characteristics both of a lady and of a gentleman.

It is important that parts that are covered should be kept cleaner than parts exposed to the air, as dirt is more apt to fester in dark places; be-

sides, parts exposed to the air have the advantage of the air's sweetening properties; air acts as a bath, and purifies the skin amazingly.

It is desirable to commence a complete system of bathing early in life, as it then becomes a second nature, and cannot afterward be dispensed with. One accustomed to morning ablution would feel most uncomfortable should anything prevent his taking it, and as soon think of dispensing with breakfast as with his bath. Where there is not a bathroom in the house, every boy, every girl, and every adult, ought each to have a room or a dressing-room to himself or to herself, in order that he or she may disrobe and thoroughly wash; no one can wash properly and effectually without doing so.

A little warm water may be added, to take off the chill. The body ought to be quickly dried, first with the wash cloth, and then the Turkish towel. In drying the back and loins throw the Turkish towel over the shoulders and move it a few times from side to side, until the parts are dry.

A boy ought to wash his head every morning with soap and water, a girl, who has much hair, once a week. The hair, if not frequently washed, gets very dirty, and nothing is more repulsive than a dirty head.

Let me strongly urge you to teach your sons and daughters to swim. Swimming is a glorious exercise—one of the best that can be taken; it expands the chest; promotes digestion; develops the

muscles, and brings into action some muscles that by any other form of exercise are but seldom brought into play; it strengthens and braces the whole frame, and thus makes the swimmer resist the liability of catching cold; it gives both boys and girls courage, energy, and self-reliance, splendid qualities in this rough world of ours. Swimming is often the means of saving human life. This of itself would be a great recommendation of its value. It is a delightful amusement; to breast the waves is as exhilarating to the spirits as clearing a five barred gate on horseback. The art of swimming is quite as necessary to be learned by a girl as a boy; the former has similar muscles, lungs, and other organs to develop, as the latter.

A boy, after using the cold bath, ought, if it *agrees* with him, to experience a pleasing glow over the whole surface of his body, his spirits and appetite should be increased, and he ought to feel stronger, but if it *disagrees* with him, a chilliness and coldness, a lassitude and a depression of spirits, will be the result, the face will be pale and the features pinched, and, in some instances, the lips and nails will become blue. All these are signs that *cold* bathing is injurious, and that it ought on no account to be persevered in. A tepid bath may be taken at almost any time, and a bather may remain longer in one, with safety, than in a cold bath.

A warm bath may be occasionally used with advantage—say, once a week. A warm bath cleanses the skin more effectually than either a cold

or a tepid bath, but, as it is more relaxing, ought not to be employed so often as either of them. A person should not continue longer than ten minutes in a warm bath. Once a week, as a rule, is quite often enough for a warm bath, and it would be an excellent plan if every boy and girl and adult would make a practice of having one *regularly* every week, unless some special reason should arise to forbid its use.

A person, *immediately* after using a warm bath, should take proper precautions—that is, he must not expose himself to draughts, wash in *cold* water, or drink *ice* water. But he may follow his usual exercise or employment, providing the weather is fine.

Management of the hair.—The best application for the hair is a sponge, *cold* water and two good hair brushes. Avoid oil, pomatum, bandoline, and all abominations of that kind. There is a natural oil of the hair, which is far superior to any other oil. The best odor for the hair is an occasional dressing of soap and water, the best beautifier of the hair is a downright thorough good brushing with two good hair brushes. Again, I say, *avoid oil of all kinds for the hair.* If the hair falls off, cocoanut oil is an excellent application, and can never do harm, which is more than can be said of many vaunted remedies.

Clothing.—Flannel is as necessary in the summer as in the winter; indeed, we are more likely to sit and stand in draughts in the summer than in the

winter, and thus are more liable to become chilled and to take cold. Woolen shirts are very comfortable and beneficial to health. They simplify the dress, as they supersede the necessity of wearing both flannel and linen, or flannel and calico shirts.

Flannel sometimes produces great irritation of the skin; to prevent it have a moderately fine flannel, and persevere in its use. The skin in a few days will bear it comfortably. The Angola and woven silk have been recommended as substitutes, but there is nothing equal to the old-fashioned Welsh flannel. On recovering from a severe attack of rheumatic fever, flannel next to the skin ought always to be worn winter and summer—flannel drawers, as well as a flannel vest. For winter the stockings ought to be of lambs wool or worsted; it is absurd to wear *cotton* stockings all the year round. Boys and girls cannot be too particular in keeping their feet warm and dry, as cold, wet feet are one of the most frequent causes of bronchitis, sore throats and consumption.

When should a girl begin to wear corsets? She ought never to wear them. Stays do not strengthen the body; on the contrary, they weaken it. The pressure upon the muscles causes them to waste, so that in the end, a girl cannot do without them. The stays are then obliged to perform the duty of the wasted muscles. *They weaken the lungs* by interfering with their functions. Every inspiration is accompanied by a movement of the ribs. If this movement is impeded, the functions of the

lungs are impeded likewise, and, consequently, disease is likely to follow, and either difficulty of breathing, cough or consumption may ensue. *They weaken the heart's action*, and thus frequently produce palpitation, and eventually organic or incurable disease of the heart. *They weaken the digestion* by pushing down the stomach and liver, and by compressing the latter, and thus induce indigestion, flatulence and liver disease. *They weaken the bowels* by impeding their peristaltic motion, and thus produce either constipation or rupture. Is it not presumptuous to imagine that man can improve upon God's works, and that if more support had been required, the Almighty would not have given it.

Girls and boys, especially the former, are too much confined within doors. It is imperatively necessary, if you wish them to be strong and healthy, that they should have plenty of fresh air and exercise. Remember, I mean fresh air—country air, not the close air of a town. By exercise, I mean the free unrestrained use of the limbs. In this respect girls are unfortunately worse off than boys. Although they have similar muscles to develop, similar lungs that require fresh air, and similar nerves that are to be braced and strengthened, it is not considered lady-like to be natural. All their movements must be measured by rule and compass. The reason why so many young girls of the present day are so sallow, under-sized and ill-shaped, is for want of air and exercise.

The best exercise for a youth is walking or running; providing either of them is not carried to fatigue,—the slightest approach to it should warn a youth to desist from carrying it any further. Walking is not sufficiently insisted upon. A boy or girl, to be in the enjoyment of good health, ought to walk at least ten miles a day. I do not mean ten miles at a stretch, but at different times of the day. Some young ladies think it an exceedingly long walk if they manage a couple of miles. With such exercise how can they expect to do well? How can their muscles be developed? How can their nerves be braced? How can their spines be strengthened, and be straight? How can their blood course merrily through their veins? How can their chests expand and become strong? It is impossible! Ill health must be the penalty of such indolence, for nature will not be trifled with! Walking is the finest exercise that can be taken. It must be taken, and that without stint, if boys and girls are to be strong and well. Let me entreat you then to insist upon your girls and boys taking plenty of exercise; let them almost live in the open air! Do not coddle them; this is a rough world of ours, and they must rough it; they must be knocked about a great deal, and the knocks will do them good. Poor youths who are tied, as it were, to their mother's apron strings, are much to be pitied; they are usually puny and delicate, and effeminate, and utterly deficient in self-reliance.

Riding on horseback is both an exercise and an

amusement, and is peculiarly suitable for the fair sex, more especially as their modes of exercise are somewhat limited, ladies being excluded from following many games, such as cricket and foot-ball, both of which are practiced with such zest and benefit by boys.

In summer the best time of day for taking exercise is early in the morning and before breakfast, as cool morning air exhilarates young blood like wine. If a boy cannot take exercise on an empty stomach, let him have a slice of bread and a glass of milk. When he returns he will be able to do justice to his breakfast. In fine weather he cannot take too much exercise, providing it is not carried to fatigue. He ought not to take exercise immediately after a hearty meal, say for half an hour after, or it will be likely to interfere with his digestion.

Amusements.—The amusements most beneficial to health, are manly games—such as rowing, skating, cricket, quoits, foot-ball, rackets, single-stick, bandy, bowls, skittles, and all gymnastic exercises. Such games bring the muscles into proper action, and thus cause them to be fully developed. They expand and strengthen the chest; they cause a due circulation of the blood, making it bound merrily through the bloodvessels, and thus diffuse health and happiness in its course. If games were more patronized in youth, so many miserable, nervous, useless creatures would not abound. Let a boy or girl have plenty of play ; let half the time be spent in play.

First of all, make your boys and girls strong, by an abundance of exercise and fresh air, and then they will be ready and able to have their minds properly cultivated. Unfortunately, in this enlightened age, we commence at the wrong end —we put the cart before the horse—we begin by cultivating the mind, and we leave the body to be taken care of afterward; the results are, broken health, precocious, stunted, crooked, and deformed youths, and premature decay.

One great advantage of gymnastic exercise is, it makes the chest expand, it fills the lungs with air, and by doing so strengthens them amazingly, and wards off many diseases. The lungs are not sufficiently exercised and expanded; boys and girls especially, as a rule, do not half fill their lungs with air; now air is food to the lungs, and portions of the lungs have not half their proper food, in consequence of which they suffer.

It is very desirable that every boy and girl should go through a regular *breathing exercise* each day. They should be made to stand upright, throw back the shoulders, and alternately and regularly fully fill and fully empty the lungs of air. If this plan were daily followed, devoting fifteen or twenty minutes to the exercise, the chest and lungs would be wonderfully invigorated, and the whole body benefited.

Amusements for a girl.—Archery, skipping, lawn-tennis, horseback riding, hand-swing, and skating, are among the best. Archery expands

the chest, throws back the shoulders, thus improving the figure, and developing the muscles. Skipping is exceedingly good exercise for a girl, every part of the body being put into action by it. Horseback riding is splendid for a girl; it improves the figure amazingly—it is most exhilarating and amusing; it also gives courage and makes her self-reliant. Croquet develops and improves the muscles of the arms, beautifies the complexion, strengthens the back, and throws out the chest. Croquet is for girls and women what cricket is for boys and men—a glorious game. Croquet has improved the health and happiness of womankind more than any game ever before invented. Skating is excellent exercise, it improves the figure, and makes a girl balance and carry herself upright and well; it is a most becoming exercise, in every way to be commended.

Choice of profession or trade.—If a youth is delicate, it is a common practice among parents either to put him to some light indoor trade, or if it can be afforded, to one of the learned professions. Such a practice is absurd and full of danger. The close confinement of an indoor trade is highly prejudicial to health. The hard reading requisite to fit a man to fill, for instance, the sacred office, only increases any delicacy of constitution. The stooping at a desk, in an attorney's office, is most trying to the chest. The harass, anxiety, disturbed nights, interrupted meals, and intense study necessary to fit a man for the medical pro-

fession, is still more dangerous to health than either law, divinity, or any indoor trade. If a boy is delicate or of consumptive habit, an outdoor calling should be advised, such as that of a farmer, a tanner, a land surveyor or a butcher. Tanners and butchers are seldom known to die of consumption.

I cannot refrain from reprobating the too common practice among parents of bringing up their boys to the professions. The anxieties and the heartaches which they undergo if they do not succeed (and how can many of them succeed when there is such a superabundance of candidates?) materially injure the health. There is nothing so injurious for a delicate boy, or for any one else, as idleness. Work, in moderation, enlivens the spirits, braces the nerves, gives tone to the muscles, and strengthens the constitution. Of all miserable people, the idle boy, or idle man, is the most miserable. If you are poor, of course you will bring your boy up to some calling; but if rich, and your boy is delicate, if you are wise you will bring him up to some trade or profession. Otherwise, you will be making a rod for your own as well as for your son's back. Oh, what a blessed thing is work!

Fresh air during sleep is indispensable to health.— If a bedroom is close, the sleep, instead of being calm and refreshing, is broken and disturbed; when the boy awakes in the morning, he feels more fatigued than when he retired to rest. If sleep is to be refreshing, the air must be pure, and free

from carbonic acid gas, which is constantly being evolved from the lungs. If the sleep is to be health-giving, the lungs ought to have oxygen—their proper food—and not to be cheated by giving them instead a poison—carbonic acid gas.

It would be well for each child to have a separate room himself. If two boys are obliged to sleep in one room, or if two girls are compelled to occupy the same chamber, by all means let each have a *separate* bed, as it is much more healthy and expedient for both boy and girl to sleep alone. Sleeping rooms are, generally, the smallest in the house, whereas, for health's sake, they ought to be the largest.

Plants and flowers ought not to be allowed to remain in a chamber at night. Experiments have proved that plants and flowers in the daytime take up carbonic acid gas (the refuse of respiration), and give off oxygen (a gas so necessary and beneficial to health), but give out at night a poisonous exhalation.

Early rising cannot be too strongly insisted upon; nothing is more conducive to health and thus to long life. A youth is frequently allowed to spend the early part of the morning in bed, breathing the impure atmosphere of a bedroom, when he should be up and inhaling the balmy and health-giving breezes of the morning. If early rising is commenced in childhood it becomes a habit, and will continue through life. A boy ought on no account to be roused from his sleep;

but, as soon as he is awake in the morning, he should be encouraged to rise. Dozing—that state between sleeping and waking—is injurious; it enervates both body and mind, and is as detrimental to health as dram drinking. But if he rises early he must go to bed betimes; it is a bad practice to keep him up until the family retires to rest. He ought to seek his pillow by nine o'clock, and should rise as soon as he awakes in the morning.

How many hours of sleep ought a boy to have?—This will depend upon the exercise he takes; but, on an average, he should have at least eight hours every night. It is a mistaken notion that a boy does *better* with *little* sleep. Infants, children, and youths require more than those who are further advanced in years. Old people can frequently do with little sleep. This may be accounted for from the quantity of exercise the young take.

The teeth and gums should be well brushed with warm salt and water, in the proportion of one large teaspoonful of salt to a tumbler of water. The salt and water should be used *every night.*

The following is an excellent tooth powder:

Take of—Finely powdered Peruvian Bark;
" " Prepared Coral;
" " Prepared Chalk;
" " Myrrh, of each half an ounce;
" " Orris root, a quarter of an ounce.

Mix well together in a mortar, and preserve the powder in a wide mouthed stoppered bottle.

The teeth ought to be well brushed with the above tooth powder every morning.

If the teeth are much decayed, and the breath offensive, two ounces of finely powdered charcoal well mixed with the above ingredients will be found a valuable addition. Some persons clean their teeth every morning with soap; if soap is used it ought to be Castile soap, and if the teeth are not white and clean, Castile soap is an excellent cleanser of the teeth, and may be used in place of the tooth powder as above recommended.

Camphor ought never to be used as an ingredient of tooth powder, as it makes the teeth brittle. Camphor certainly has the effect of making the teeth look very white, but it is an evanescent beauty.

Tartar is apt to accumulate between and around the teeth; it is better in such cases *not* to remove it by scaling instruments, but brush the teeth well with pure vinegar and water.

A greater quantity of arterial blood is sent to the brain of those who are prematurely talented, and it thus becomes more than ordinarily developed. Such advantages are not unmixed with danger; this same arterial blood may excite and feed inflammation, and either convulsions, water on the brain, insanity, or idiocy may follow. How proud a mother is in having a precocious child. How little is she aware that precocity is frequently an indication of disease.

It behooves a parent, if her son is precocious, to restrain him—to send him to a quiet country place, free from the excitement of the town, and

when he is sent to school, to give directions to the teacher that he is not on any account to tax his intellect (for a teacher is apt, if he has a clever boy, to urge him forward), and to keep him from those institutions where a spirit of rivalry is maintained, and where the brain is thus kept in a state of constant excitement. Medals and prizes are well enough for those who have moderate abilities, but dangerous indeed to those who have brilliant ones.

An overworked precocious brain is apt to cause the death of the owner, and if it does not, it, in too many instances, injures the brain irreparably, and the possessor of such an organ, from being one of the most intelligent of children, becomes one of the most commonplace of men. Let me urge you, if you have a precocious child, to give, and that before it is too late, the subject in question your best consideration.

Precocious boys in their general health are usually delicate. Nature seems to have given a delicate body to compensate for the advantages of a talented mind. A precocious youth is predisposed to consumption, more than to any other disease. The hard study which he frequently undergoes excites the disease into action. It is not desirable, therefore, to have a precocious child.

Scrofula.—The child who has a moist, cold, fair, delicate and almost transparent skin, large prominent blue eyes, protuberant forehead, light

brown or auburn hair, rosy cheeks, pouting lips, milk white teeth, long neck, high shoulders, small, flat and contracted chest, tumid bowels, large joints, thin limbs and flabby muscles, is the one most predisposed to scrofula. The disease is not entirely confined to the above, sometimes one who has black hair, dark eyes and complexion, is subject to it, but yet far less frequently than the former. It is a remarkable fact that the most talented are the most prone to scrofula, and being thus clever their intellects are too often cultivated at the expense of their health. In infancy and childhood, either water on the brain or mesenteric disease, in youth, pulmonary consumption is frequently their doom; they are like shining meteors, their life is short, but brilliant.

Strict attention to the rules of health is the means to prevent scrofula. Books, unless as an amusement, ought to be discarded. The patient must live in the open air, and his residence should be a healthy country place, where the air is dry and bracing; if it is at a farm house, in a salubrious neighborhood, so much the better. In selecting a house for a patient predisposed to scrofula, *good pure water should be an important requisite;* indeed, for every one who values his health. Early rising is most beneficial. Beefsteaks and mutton chops in abundance, and plenty of milk and farinaceous food—such as rice, sago, arrowroot, etc., should be the diet.

Scrofula, if the above rules are strictly and per-

severingly followed, may be warded off, but there must be no half measures, no trying to serve two masters—to cultivate at the same time the health and the intellect. The brain must *not* be taxed until the body becomes strong. "You may prevent scrofula by care, but that some children are originally predisposed to the disease there cannot be the least doubt, and in such cases the education and habits of the youth should be so directed as to ward off a complaint, the effects of which are so frequently fatal."

Suppose the disease to be already formed, the plan recommended above must still be pursued, not by fits and starts, but steadily and continuously, for it is a complaint that requires a vast amount of patience and great perseverance. Sea bathing in such cases is generally most beneficial.

Do not allow any plan to be adopted that will weaken the system, which is already too much depressed. Rather build up the body by good nourishing diet, and by a dry, bracing atmosphere. Let no active purging, no mercurials, no violent, desperate remedies be allowed. If the patient cannot be cured *without* them, I am positive that he will not be cured *with* them. But do not despair; many scrofulous patients are cured by time and judicious treatment. But if desperate remedies are to be used, the poor patient had better *by far* be left to nature.

A girl ought never to be allowed to stoop; stooping spoils the figure, weakens the chest, and interferes

with the digestion. If she cannot help stooping, you may depend upon it that she is in bad health, and calisthenic and gymnastic exercises should be resorted to. Horseback riding and swimming are very beneficial. The girl should live well, on good nourishing diet, and not be too closely confined to the house or her lessons. She ought to sleep on a hair mattress, and during the day lie flat on her back on a reclining board for two or three hours. Stooping, if neglected, is very apt to lead to consumption.

If a boy is round shouldered, let him be drilled; there is nothing more likely to benefit him than drilling. You never see a soldier round shouldered or slouchy in his gait. He walks every inch a man. Look at the difference in appearance between a country bumpkin and a soldier. It is the drilling that makes the difference.

Spitting blood is always to be looked upon with suspicion; even when a youth appears, in other respects, to be in good health, it is frequently the forerunner of consumption. It may be said that, by mentioning the fact, that I am unnecessarily alarming a parent, but it would be a false kindness if I did not do so:

"I must be cruel, only to be kind."—*Shakespeare.*

Let me ask, when is consumption to be cured? Is it at the onset, or is it when it is confirmed? If a mother had been more generally aware that spitting blood was frequently the forerunner of con-

sumption, she would have taken far greater precautions in the management of her offspring, she would have made everything give way to the preservation of health, and, in many instances, she would have been amply repaid by having the lives of her children spared to her. Consumption more frequently shows itself between the ages of fourteen and twenty-one, after that the liability of the disease gradually diminishes, until at the age of forty-five it becomes comparatively rare. Boys are more prone to this complaint than girls. It may be well for a parent to recognize the symptoms in order that she may seek aid early. It is perfectly hopeless to expect to cure consumption, unless advice is sought at the *onset*, as the only effectual good in this disease is to be done *at first*.

Consumption creeps on insidiously. One of the earliest symptoms of this dreadful scourge is a slight, dry, short cough, attended with tickling and irritation at the top of the throat. This cough generally occurs through the day. Frequently during the early stage of the disease *a slight spitting of blood occurs*. This is a most dangerous symptom; indeed, it is almost a sure sign that the patient is in the *first* stages of consumption.

There is usually hoarseness, not constant, but coming on if the patient is tired, or toward the evening. There is also a sense of lassitude and depression, shortness of breath, a feeling of weariness on the slightest exertion. The hair of a consumptive person usually falls off, and what little

remains is weak and poor; the joints of the fingers become enlarged, or clubbed as it is sometimes called; the patient loses flesh, and, after some time, night sweats make their appearance, then we may know that hectic fever has commenced.

Hectic fever begins with chilliness, which is soon followed by flushings of the face and burning of the hands and feet, especially of the palms and soles. This is soon succeeded by perspirations. The patient has generally two decided paroxysms of hectic fever during the day, one at noon which lasts about five hours; the other in the evening, which is more severe, and ends in violent perspirations; these perspirations continue the whole night through. During the day he may have several attacks of hectic flushes, especially after eating; at one moment he complains of being too hot, and rushes to the cool air; the next moment he is too cold, and almost scorches himself by sitting too near the fire. Whenever the circumscribed hectic flush is on the cheek, it looks as though the cheek had been painted with vermillion, then is the time when the palms of the hands are burning hot.

The expectoration at first is merely mucus, but after a time it assumes a characteristic appearance; it has a roundish, flocculent, woolly form, each portion of phlegm keeping, as it were, distinct; and if the expectoration is stirred in water, it has a milk-like appearance. The patient is commonly harassed by frequent bowel complaints, which rob him of what little strength he has left. The feet and

ankles swell. The perspiration comes on in the evening, and continues all night—more especially toward morning, and while the patient is asleep. During the time he is awake, even at night, he seldom sweats much. The thrush generally shows itself toward the close of the disease, attacking the tongue, tonsils, and soft palate, *and is a sure harbinger of approaching death.* Emaciation rapidly sets in.

The *predisposing* causes of consumption are the tuberculous habit of body, hereditary predisposition, narrow or contracted chest, deformed spine, delicacy of constitution, bad and scanty diet, or food containing but little nourishment, impure air, close indoor confinement in schools, shops, and factories, ill-ventilated apartments, dissipation, late hours, overtaxing the growing brain with book-learning, thus producing debility, want of proper outdoor exercises and amusements, tight lacing; indeed, anything and everything that will debilitate the constitution, interfere with, or impede, the proper action of the lungs, will be the predisposing causes of this fearful and lamentable disease.

An ill, poor, and insufficient diet is the mother of many diseases, and especially of consumption: "Whatsoever was the father of a disease, an ill diet was the mother." The most common *exciting* causes of consumption are slighted colds, neglected inflammation of the chest, long continuance of influenza, sleeping in damp beds, allowing

wet clothes to dry on the body, unhealthy employments, etc.

Treatment.—The health should be the first consideration; throw books to the winds; if he is at school, take him away; if he is in trade, cancel his indentures; if he is in town, send him to a sheltered healthy spot in the country. I should be particular in his clothing, taking especial care to keep his chest and feet warm. If he does not already wear flannel, let it be winter or summer, I should recommend him immediately to do so. The feet must be carefully attended to; they ought to be kept both warm and dry, the slightest dampness of either shoes or stockings should cause them to be immediately changed. If a boy, he ought to wear double-breasted waistcoats; if a girl, high dresses.

The diet must be nutritious and generous; the patient should be encouraged to eat plentifully of beef and mutton. There is nothing better for breakfast, where it agrees, than milk; indeed, it may be frequently made to agree by previously boiling it. Good home-brewed ale or sound porter ought to be taken in moderation. Wine and spirits must on no account be allowed. I caution parents in this particular, as many have an idea that wine is strengthening, and that *rum* and milk is a good thing to cure or prevent a cough.

If it is summer, let him be much in the open air, avoiding the evening and the night air. If it is winter, he should, unless the weather is mild for

the season, keep within doors. Particular attention ought to be paid to the point the wind is in, as he should not be allowed to go out if it is north, east, or northeast; the latter is more especially dangerous.

If a youth is predisposed to a sore throat, he must use every morning thorough ablution of the body, beginning cautiously; that is, commencing with the neck one morning, then by degrees, morning after morning, sponging a larger surface, until the whole of the body is sponged. The chill at first must be taken off the water; gradually the temperature ought to be lowered until the water is quite cold, taking care to rub the body thoroughly dry with a coarse towel—a Turkish rubber being the best for the purpose.

He ought to bathe his throat externally every night and morning with lukewarm salt and water, the temperature of which must be gradually reduced, until at length no warm water is added. He should gargle his throat either with barm, vinegar, and sage tea, or with salt water—two teaspoonfuls of table salt dissolved in a tumbler of water. He ought to harden himself by taking plenty of exercise in the open air. He must avoid sitting or standing in a draught; if in one, he should face it. He ought to keep his feet warm and dry. He should take as little laxative medicine as possible, avoiding especially both calomel and blue pill. As he grows up to manhood he ought to allow his beard to grow, as such would

be a natural covering for his throat. I have known great benefit to arise from this simple plan. The finest respirator in the world is the beard. The beard is not only good for sore throats, but for weak chests. The wearing of the beard is a splendid innovation; it saves no end of trouble, is very beneficial to health, and is a great improvement to the human face divine.

I consider tobacco smoking one of the most injurious and deadly habits a boy or young man can indulge in. It contracts the chest and weakens the lungs, thus predisposing to consumption. It impairs the stomach, producing indigestion. It debilitates the brain and nervous system, inducing epileptic fits and nervous depression. It stunts the growth, and is one cause of the present race of pigmies. It makes the young lazy and disinclined to work. It is one of the greatest curses of the present day.

Nose-bleed.—Unless it is violent, do not interfere with a bleeding from the nose. A bleeding from the nose is frequently an effort of Nature to relieve itself, and unless it is likely to weaken the patient, ought not to be restrained. If it is necessary to restrain the bleeding, press the nose firmly between the finger and thumb for a few minutes, this alone will often stop the bleeding; if it should not, then try what bathing the nose, forehead and nape of the neck with water quite cold from the well, will do, or try the effect of a solution of alum.

Take of—Powdered Alum, one dram.
Water, half a pint.
To make a lotion.

A little of the lotion should be put into the palm of the hand and sniffed up the bleeding nostril. If this does not succeed, some of the lotion ought to be syringed up the nose.

In case a young lady faints, lay her flat upon her back, taking care that the head is as low, if not lower, than the body; throw open the windows, do not crowd around her, unloosen her dress as quickly as possible; ascertain if she has been guilty of tight lacing—for fainting is sometimes produced by that reprehensible practice. Apply smelling salts to her nostrils; if they are not at hand, burn a piece of cloth under her nose; dash cold water upon her face; throw open the window; fan her; and do not, as is generally done, crowd around her, and thus prevent a free circulation of air. As soon as she can swallow, give her a draught of *cold* water or a teaspoonful of sal-volatile in a wine glass of water.

To prevent fainting.—I would recommend early hours; country air and exercise; the stays, if worn at all, to be worn slack; attention to diet; avoidance of excitement and fashionable entertainments.

Sometimes the cause of a young lady fainting, is either a disordered stomach or a constipated state of the bowels. If the fainting has been caused by a *disordered stomach*, it may be necessary to stop the supplies, and give the stomach, for

a day or two, but little to do; a fast will frequently prevent the necessity of giving medicine.

A young lady's fainting occasionally arises from debility—from downright weakness of the constitution; then the best remedy will be change of air, good nourishing diet, and the following strengthening mixture:

Take of—Tincture of Perchloride of Iron, two drams;
Tincture of Calumbo, six drams;
Distilled Water, seven ounces.
Two tablespoonfuls of this mixture to be taken three times a day.

Or, for a change, the following:

Take of—Wine of Iron, one ounce and a half;
Distilled Water, six ounces and a half.
To make a mixture. Two tablespoonfuls to be taken three times a day.

Iron medicines ought always to be taken *after* instead of *before* a meal. The best times of the day for taking either of the above mixtures will be eleven o'clock, four o'clock, and seven o'clock.

Constipation.—If you find it necessary to give your son or daughter an aperient, the mildest should be selected; for instance, an agreeable and effectual one, is an electuary composed of figs, raisins and senna, a formula for which may be found on page 113. But after all, the best laxatives are—cold ablutions every morning, of the whole body; attention to diet; variety of food; Graham bread, grapes, figs, fruit both cooked and raw—if it is ripe and sound; oatmeal porridge; vegetables of all kinds, especially spinach; exercise in the open air; early rising; daily visiting the water

closet at a certain hour—there is nothing keeps the bowels open so regularly and well as establishing the habit of visiting the water closet at a certain hour every morning; and the other rules of health specified in these pages. If more attention were paid to these points, poor school boys and school girls would not be compelled to swallow such nauseous and disgusting messes as they usually do, to their aversion and injury.

Should these plans not succeed, I would advise an enema once or twice a week, either simply of warm water, or of one made of gruel, table salt and olive oil, in the proportion of two tablespoonfuls of table salt, two of oil and a pint of warm gruel, which a boy may administer to himself, or a girl to herself, by means of a fountain syringe.

Hydropathy is oftentimes very serviceable in preventing and in curing constipation; and as it will sometimes prevent the necessity of administering medicine, it is both a boon and a blessing. Hydropathy also supplies us with various remedies for constipation. From the simple glass of cold water, taken early in the morning, to the various douches and sea baths, a long list of useful appliances might be made out, among which we mention the wet compresses worn for three hours over the abdomen with an oil-cloth covering. For a more complete treatment of this subject, the reader is referred to the chapter on constipation.

I have here a word or two to say to a mother who is always physicking her family. It is an un-

natural thing to be constantly dosing either a child or any one else with medicine. One would suppose that some people were only sent into the world to be physicked. If more care were paid to the rules of health, very little medicine would be required. This is a bold assertion, but I am confident that it is a true one. It is a strange admission for a doctor to make, but, nevertheless, my convictions compel me to avow it.

The principal reason why girls suffer more from constipation than boys, is that their habits are more sedentary. The best laxative medicines in the world are an abundance of exercise, muscular exertion and fresh air. Another, and a frequent cause, is the bad habit of disobeying the calls of nature. The moment there is the slightest inclination to relieve the bowels, *instantly* it ought to be attended to, or serious results will follow. Let me urge a mother to instil into her daughter's mind the importance of this advice.

Young people are subject to pimples on the face.—These hard red pimples are a common and an obstinate affection of the skin, affecting the forehead, temples, the nose, chin, and cheeks; occasionally attacking the neck, shoulders, back, and chest. As they more frequently affect the young, and are disfiguring, they cause much annoyance. I find, in these cases, great benefit from bathing the face, night and morning, with strong salt and water—a tablespoonful of table salt to a teacupful of water; paying attention to the bowels; living on plain,

wholesome, nourishing food; and taking a great deal of outdoor exercise. Sea bathing is often very beneficial. Grubs and worms have a mortal antipathy to salt.

Gumboil.—A decayed root of a tooth causes inflammation and abscess of the gum, which abscess breaks, and becomes a gumboil.

Treatment.—Foment the outside of the face with a hot camomile and poppy head fomentation, and apply to the gumboil, between the cheek and the gum, a small white bread and milk poultice, which renew frequently. As soon as the gumboil has become quiet, *by all means* have the affected tooth extracted, or it may cause disease, and consequently serious injury of the jaw. Whenever the patient catches cold there will be a renewal of the inflammation of the abscess, and the gumboil, and, as a matter of course, renewed pain, trouble, and annoyance. Decayed fangs of teeth often cause the breath to be offensive.

Corns.—The best remedy for a *hard corn* is to remove it. The usual method of cutting, or of paring a corn away is erroneous. The following is the right way: Cut with a *sharp* pair of pointed scissors around the circumference of the corn. Work gradually round and round and toward the center. When you have well loosened the edges, you can either with your fingers or with a pair of forceps, generally remove the corn bodily, and that without pain and the loss of any blood. This plan of treating a corn I can recommend to you as being most effectual.

The corns between the toes are called *soft corns*. A *soft corn* is quickly removed by the strong acetic acid, which ought to be applied to the corn every night by means of a camel's hair brush. The toes should be kept asunder for a few minutes, in order that the acid may soak in; then apply between the toes a small piece of cotton.

In the generality of cases the plans recommended above will effect a cure, but if from pressure or from any other cause the corn should return, remove it again, and proceed as before directed. If the corn has been caused by tight or ill fitting shoes, the only way to prevent a recurrence is to have the shoes properly made by a clever shoemaker—by one who thoroughly understands his business, and who will have a pair of lasts made purposely for the feet.

The best remedy for tender, sweaty, or smelling feet, is cold water. Bathe the feet in cold water, beginning with tepid water; but gradually from day to day reducing the warm until the water is quite cold. A large nursery basin one-third full of water ought to be placed on the floor, and one foot at a time should be put in the water, washing the foot with a sponge and the thumb between each toe. Each foot should remain in the water about half a minute after each washing. The feet ought to be well dried, taking care to dry with the towel between each toe. The above process must be repeated at least once every day—every morning, and if the annoyance is great, every night as

well. A clean pair of stockings ought to be put on daily, as perfect cleanliness is absolutely necessary to afford relief, and effect a cure.

There is something charming and delightful in the feelings of a patient recovering from a severe illness; it is like a new birth; it is almost worth the pains and anguish of having been ill to feel quite well again; everything around and about wears a charming aspect—a roseate hue; the appetite for food returns with pristine vigor; the viands, be they ever so homely, never tasted before so deliciously sweet; and a draught of water from the spring has the flavor of ambrosial nectar; the convalescent treads the ground as though he were on the ambient air; and the earth to him for a while is Paradise; the very act of living is a joy and gladness.

CHAPTER XV.

DISEASES OF WOMEN.

Metritis or Chronic Inflammation of the Womb.—Of all uterine diseases in importance and frequence, chronic inflammation ranks first. It is most common between the ages of puberty and the cessation of the menses, but it may occur at any time of life. This inflammation may be simple or complicated, but a vast majority of so-called "female complaints" have their origin in *acute* inflammation of the womb, which soon passes into the chronic form by the persistence of the *cause*.

No class or nation is exempt from the baneful influence of this disease—but it is met most frequently among women reared in indolence and luxury whose physical conditions are weakened by prevailing fashions and customs.

Poverty and privation also furnish a long array of victims—while those who best observe the laws of health are most exempt from the disease.

There are many varieties of the disease, and each receives its name according to the part affected, thus: *Inflammation of the body of the womb; Inflammation of the lining membrane of the body of the womb; Inflammation of the membrane lining*

and covering neck of the womb; Inflammation of the tissues of the neck of the womb; Ulceration of the neck of the womb.

The womb consists of a body and neck which may be considered as two distinct organs in their anatomical structure, the former being composed of longitudinal fibers, while those of the neck are circular, and each receive their supply of blood-vessels and nerves from different sources. Therefore, a diseased condition of the neck of the womb does not necessarily imply a similar condition in the body, and vice versa. Inflammation of the body of the womb is liable to be very persistent, as usually the adjoining lining membranes are also involved.

In a work of this kind it is not necessary to enter into a minute detail of all the symptoms of each variety of uterine disease, as any variety in a severe form would require a personal examination by a proficient and experienced physician. The design of this work is, in a general way, to enlighten mothers and daughters in regard to the symptoms attending uterine disorders, their prevention and the remedies to be used for their cure in home practice. The symptoms attending diseases of the womb are so similar that accuracy is not necessary for the general reader.

Symptoms.—All inflammations are accompanied with more or less pain and swelling—the degree of which is materially modified by the location of the disease.

Often an inflammation of the neck of the womb may exist for a period of years, especially in the unmarried, without giving any great discomfort—more than a feeling of lassitude, with an inability to stand erect or walk for any length of time. More or less whites or leucorrhœa will be noticed. Menstrual disorders may follow—the discharge being too profuse or too scanty, and attended with more or less pains. These latter symptoms follow as the disease becomes more chronic. This disease is not *apt* to exist very long before a general impairment of the health will result. The patient becomes restless and wakeful, with loss of appetite and enfeebled digestion, pale and nervous. An inflammation of the body of the womb is attended with a sensation of weight and fullness in the pelvic region—pain in the back and hips. The pain in the back is often attributed to a "kidney trouble." Plasters are applied and potions vainly taken for its relief. If the *kidneys* are overtaxed and painful, the seat of the pain is in the small of the back or under the waist line, while if the pain is the result of female diseases, it is located fully a hand's breadth *below* this line.

As the inflammation progresses the feeling of weight and heaviness increases till the pain extends down the limbs and through the bowels. Physical exertion is painful, and at times almost impossible.

Leucorrhœa is a frequent symptom of inflammation of the womb, yet unaccompanied by other

symptoms would be of little value in establishing the fact of inflammation of the womb, as the leucorrhœa may proceed from an irritable condition of the vagina or the external generative organs—or it may be catarrhal from a cold.

In chronic inflammation of the body as well as of the neck of the womb, the menstrual flow is usually impaired somewhat.

The periods may occur too often, or be tardy, or painful and too prolonged. Sterility often follows a severe inflammation of either the body or neck of the uterus—and sexual intercourse is attended with more or less pain, according to the degree of inflammation. If the disease is of long standing, other organs of the abdomen and pelvis are liable to beeome involved. Chronic inflammation of the womb often produces a severe inflammation of the vagina, which may be recognized by a profuse, milky, leucorrhœal discharge.

The ovaries are supplied by the same system of bloodvessels, and readily inflame when there is an increased action of the uterus.

Ovarian tumors are often the result of a prolonged inflammation of the womb. Catarrhal discharges from the bowels, and piles or hemorrhoids may follow inflammation of the womb, especially when there is retroversion or a falling backward of the body of the womb. It is apparent that the *cause* must be removed before the disease will disappear. The restoration to health of each organ involved, will necessarily be slow, and great patience will be required.

Distant organs sympathize with a serious disease of the womb. Headaches, dizziness, nausea, vomiting, pain at the base of the brain, pain over the eyes, a feeling that the reason is leaving, and a whole train of nervous disorders manifest themselves.

The condition of the stomach may be that of pregnancy. Digestion is much impaired, and in consequence of it an accumulation of gas in the bowels may simulate the movements of a child, misleading the patient to suppose she is pregnant. Time will convince her that she is not. This subject has been fully treated under the head of *Flatulence*, and a reference to that section will enable her to determine the true condition.

Chronic inflammation of the womb, when of long standing, greatly impairs, if not wholly destroys the general health. The circulation is sluggish, the hands and feet are cold, the face wears an anxious expression, the muscles become weak and easily tire with only moderate use. The disposition becomes irritable and nervous—a slight provocation being sufficient to bring on an attack of hysteria. The whole temperament and disposition seems changed. Friends are regarded with distrust, and therefore avoided. The patient becomes morbidly sensitive, and always looks upon the dark side of life. She broods over her maladies, and is never so much "at home" as when relating her experiences to others. Any apparent lack of sympathy is sure to give offence, and unless

the disease is cured, the situation becomes appalling to the patient and her family. After years of suffering the patient takes her bed because she lacks the strength or courage to longer battle with the disease. Death seldom hastens to her relief unless there are hereditary complications—such as consumption, scrofula or cancer. There is no possible doubt that many cases of insanity among women have their origin in some form of uterine disease. It is common for women to feel solicitous as to the result of the menopause or "change of life," as it is regarded usually as a critical period in a woman's life. It is a *natural* and orderly step in life, and with a previous due regard to the laws of health, should be as little attended with danger as our birth or the stage of puberty. Women of a hopeful disposition are usually benefited by "the change," especially if they have borne many children. It is to them a period of rest. It is always advisable to maintain a hopeful disposition. To dwell upon our physical condition only makes the disease more persistent.

The picture is not a cheerful one that we have submitted for your consideration, but it is one daily met with in a physician's life. Many cases of womb disease are permitted to become chronic, through the ignorance of the patient as to the cause of her ailments or because she feels a delicacy in consulting a physician and obtaining the needed advice or treatment that would have saved her years of suffering. In all cases of female disorders

when the patient is uncertain as to the cause or the remedy, she should not hesitate to place herself in the hands of a skillful physician for a thorough examination as soon as the first symptoms of the disorder appear. "An ounce of prevention is worth a pound of cure" is a wise adage.

The causes which may lead to the development of uterine disorders are many—such as a sudden checking of the menses from exposure to cold—an injection of cold water when in an over-heated condition—lifting too heavy weights—falls and blows across the abdomen—any of these may be the exciting causes of serious uterine derangement. The predisposing cause may exist in an inherited weakly constitution.

Another fruitful source of uterine disorder is wearing improper clothing. The fashionably dressed woman of this age can scarcely escape becoming, sooner or later, a victim of disease. A young lady in "full dress" is a sad picture to a thoughtful mind. The waist is compressed to the smallest possible dimension, pressing every organ out of its proper position. The neck, shoulders and arms subjected to all vicissitudes of weather—the weight of the clothing is borne by the hips and abdomen instead of being borne by the shoulders, as it ought to be. The wonder is that any woman fails to reap the full harvest of her folly. The free circulation of the blood through the body is impeded by tight lacing, and congestion of the organs of the pelvis follow as a result. Any cause that pro-

duces stagnation of the blood, developes in time congestion and relaxation. For example—fasten a rubber band around the arm, only moderately tight, and in a short time the hand begins to swell and congest by reason of the inability of the veins to return the blood to the arteries—serious results will follow if the congestion is prolonged. When the clothing is removed there is a sense of relief, and nature strives to regain her lost ground, but a daily repetition of the abuses soon overcomes all power to react, and hopeless disease is fastened upon the victim.

Debility.—Any cause which leads to a general weakness of the muscles of the abdomen predisposes to diseases of the womb, especially to flexions and inflammation.

If the health is impaired, the muscles and ligaments supporting the womb and bowels sympathize in the general debility. Women of health who lead lives of ease and luxury, eat unwholesome food at unreasonable hours, and who cultivate the mental rather than the physical, are particularly predisposed to female complaints.

In such instances comparatively trifling causes, such as a day of unusual excitement or exercise—a sudden cold—a slight imprudence during the menstrual period, may be sufficient to plunge the victim into years of suffering. Displacements easily occur in relaxed conditions of the abdominal muscles. Displacements are reasonably sure to be followed by inflammations and congestions.

Exercise.—Regular daily exercise in walking or horseback riding is essential to the proper development of the abdominal muscles. Those muscles play an important part in the support of the uterus, and any exercise that will develop their strength lessens the liability to uterine disease. The exercises recommended in the chapter on constipation will be found equally efficacious in uterine diseases.

The wonderful mental activity of women of this age, except in the lower classes, is greatly disproportionate to their physical ability. The result is, women are weak and sickly—incapable of becoming mothers of healthy, well-developed children. So called female complaints were hardly known to our grandmothers, but now the per cent. of women afflicted with uterine disease, in one form or another, is found to average fully seven out of every ten.

With this array of facts before us, it behooves mothers and daughters to study well the symptoms of disease—the causes that lead to their development, as well as the means of their prevention. If one-tenth the effort was put forth to enlighten women on these vital questions upon which depend the future of our race, that is displayed to teach women that they *need* the elective franchise, we might then develop a race of women who would be gladly admitted to legislative halls, because their combined physical and intellectual strength would be well adapted to give counsel and aid in the affairs of the nation. Let women

first learn the proper care and government of themselves and their children before they clamor to participate in the affairs of state.

It is an agreeable fact that women are becoming more thoughtful and inquiring upon the subject of health—and anxious to acquaint themselves with the symptoms of diseases and the proper remedies for the same.

Treatment.—We must first learn the *cause* of acute or chronic inflammation of the womb and remove it before we can expect a permanent cure. As has been previously said, one of the principal causes of female diseases is found in the utter disregard of the laws of health in matters of dress. I am aware that society demands a certain recognition of fashion, and that it is extremely difficult to design a costume that shall be both healthful and fashionable. A great reform in women's dress is demanded if we would have healthy, vigorous wives and daughters. While delays in adopting a dress reform are to be expected I would not, as a woman and physician, feel that I had discharged a duty I owe to the future generation if I did not enter an earnest protest against the present long-waisted tight-fitting dress. No woman can adopt it for a series of five years and keep herself free from uterine difficulties in some form. The waist of the dress should be worn loosely, so that the lungs can expand *fully* at each inspiration. The weight of the clothing should be borne by the shoulders. No pressure or weight should be

allowed to rest upon the hips and bowels, as such a course, long continued, will result in misplacements and congestions.

The injurious effect of high-heeled shoes can hardly be overdrawn. The abdominal and pelvic muscles are kept upon a tension which will produce serious inflammation of the pelvic organs. "Common sense shoes" are the only sensible shoes for a woman to wear.

Ladies who cannot decide to abandon the corset altogether, should select one with spiral springs at the sides, which expand and contract in accordance with the motions of the body. This corset should be provided with shoulder straps, by which the weight of the clothing is borne. Buttons should be sewed upon the corset at the waist line, to which the skirts may be attached by means of buttonholes in the bands.

A very convenient under-waist may be made of silesia or drilling. The front and back are cut like any dress-waist, only very loose fitting—cut out that part of the front covering the bust and replace by a gathered puff about eighteen inches long and the depth of the piece removed. The waist should be finished at the bottom with a band two inches wide and lined with heavy material, so as to be strong enough to bear the weight of the skirts suspended to it by means of buttons. It will be seen that this waist is made to support the weight of clothing from the shoulder without the annoyance of straps or suspenders. The effect of

this waist is to give a full, well developed bust. Under vests made of "Jersey cloth" are especially comfortable, as they cling closely to the body and yet do not impair the movements of the body or impede the circulation.

Pure air.—Too much cannot be said of the benefits derived from exercise in open, pure air. As a tonic, it is better than medicine. It gives tone to the appetite, aids digestion, and lends vigor to both mind and body. Invalids who suffer from nervous prostration or from uterine diseases, should live much in the open sunshine. Outdoor life reinforces the strength, increases the appetite, repairs the blood, quiets the nerves and gives new life and health to the body. The greatest physicians are good water, sunlight, and exercise in pure air. Women suffering from womb disease are exceedingly nervous, often almost hysterical, and apt to be very irritable. To spend an hour or two in the open air, either in walking, riding or some healthful amusement, will often wholly relieve the above distressing symptoms. If the patient is too weak to go out or too ill to be carried out of doors, the room should be thoroughly aired as often as nervous indications arise. Dr. Byford suggests the following methods: "If it is cold weather we should cover the patient to protect her, and let the frosty air—the colder the better—into the room by opening *all* the doors and windows, and keep the room clear of visitors. It will astonish anybody who has not observed the effect of a temper-

ature near zero, on those swooning hypochondriacs. A change almost instantly occurs for the better. If the air is not cold, it will still do much good to give it perfectly fresh to the patients in abundance. When able, they may be taken out of doors. This treatment introduces the *natural* stimulants, oxygen and cold, into the lungs, and brings them into contact with the nerves and is more enlivening than medicine. How long the room should be kept open and cold, will depend upon the effect; but we should always, if possible, make these patients sleep in open, cold rooms. This is a very important item, which will often require ingenuity as well as authority to enforce."

Food.—The tendency of uterine disease is to reduce the quality of the blood and produce weakness and debility. Therefore the food should be generously given and of a very nutritious character, and not highly seasoned. Milk, cream, soft eggs, rare beef, game, poultry, mutton chops, fish oatmeal and graham bread are most suitable for a diet. If the patient is too weak to eat meats of any kind, the concentrated juices of them in the form of extracts should be given in quantities sufficient to build up the system.

Tonics.—Tonic medicines will not be required very long, if the patient can be induced to try the benefits of outdoor life and moderate exercise. In case of too great prostration of the patient to exercise mildly, some gentle stimulant, as ale or porter may be used sparingly, as an appetizer, but

great caution is necessary in their use, that the patient does not acquire a love for stimulants. Some vegetable tonic may be given instead of ale or porter. The kind of tonic must be determined by the condition of the stomach and the peculiarities of the case. If the patient is pale and bloodless, has cold hands and feet, the following prescription will be beneficial:

Take of—Sulphate of Quinine, one dram;
Tincture of Chloride of Iron, one-half ounce;
Tincture of Bitter Orange Compound, three ounces;
Simple Syrup, three and one-half ounces.

Mix.—Add two grains of Strychnine, dissolved in one dram of Acetic Acid.

One teaspoonful in a wine glass of water to be taken after each meal.

Or,

Take of—Pyrophosphate of Iron, four drams;
Sulphate of Quinine, two drams;
Compound Tincture of Gentian, five ounces;
Compound Tincture of Dandelion, three ounces.

Mix.—One teaspoonful to be taken before each meal. The same amount of Strychnine may be added to this formula as to the formula above, if desired.

If there is any tendency to indigestion, or a weakened condition of the stomach, the above formula, with the strychnine added, will be found a very valuable remedy. The dose of the strychnine is *very* small and not attended with any danger whatever, in the dose prescribed. Do not use both formulas at the same time, but it might be well to alternately use them.

In most cases of inflammation of the womb, there

is a tendency to constipation of the bowels, which must in no wise be permitted to remain, as a perfect cure of uterine inflammation cannot be accomplished while constipation exists. Strict attention must be paid to the rules laid down in the chapter treating on that subject.

Sleep.—Uterine disease is productive of great nervous excitability, often to such an extent that the patient finds it almost impossible to sleep. Attention to hygienic measures, such as proper ventilation of the sleeping room, exercise and a generous out-of-door life, will often be all that the patient needs to secure the most refreshing sleep. If, however, the inability to sleep is persistent after faithfully adopting the above hygienic measures, relaxing medicines must be resorted to.

The best remedies of this class are preparations of Bromide of Potassium or Sodium with Hyoscyamus.

Take of—Elixir of Bromide of Potassium, three and one-half ounces;
Fluid Extract of Hyoscyamus, one-half ounce.
Mix.—Take one or two teaspoonfuls each night before retiring.

If necessary, the dose can be repeated in an hour or two.

Or,

Take of—Extract of Hyoscyamus, thirty grains;
Extract of Hops, one dram.

Mix.—Make twenty-four pills. Take one pill one-half hour before retiring, and repeat the dose in an hour if needed. Opium and Hydrate of Chloral are both valuable remedies to induce sleep, but

should never be resorted to, except under the advice of a physician, as both the drugs are attended with danger when improperly used.

Sexual excitement.—In all cases of acute inflammation of the uterus there should be a total abstinence of marital relations. This is not always easily accomplished, as few husbands understand the necessity for such a course. Anything which tends to attract the blood to the womb, will increase the congestion and inflammation; therefore sexual intercourse, impure thoughts and conversations, everything which tends to arouse the passions, should be carefully avoided. Travel and a change of scenery are often very beneficial, from the fact that the necessary rest can be secured, and the thoughts will be diverted from the disease, which is of incalculable value to the patient. Constantly dwelling upon any disease most surely fastens its hold upon the patient. It should, therefore, be the aim of friends to divert the mind into any healthy channel. Do not refer to her malady as a serious matter. Be cheerful and hopeful in her presence. If the mind is bereft of all hope, recovery is impossible, so great is the influence of the mind over the body.

In *acute* stages of inflammation of the womb, perfect rest in bed should be required. The pains should be relieved by warm poultices of flaxseed or yeast, applied over the bowels. If the weight of the poultice is objectionable, a liniment made from the following formula will be exceedingly useful:

Take of—Hydrate of Chloral, two ounces;
Gum Camphor, two ounces;
Chloroform, two ounces;
Tincture of Aconite Root, two ounces.

Mix.—Apply over the bowels freely every two or three hours and rub in, after which cover with a warm, dry flannel.

Five grain doses of Dover's Powders may be given three hours apart to relieve pain and produce sleep. After the inflammation has passed into a chronic state, exercise *is* advisable. There is a great diversity of opinion in regard to the effect of exercise among the medical profession—but after years of observation, covering a large practice in female diseases, I am convinced of the utility of exercise, especially in the open air. Light household duties are not objectionable. Exercise will divert the blood from the congested parts and afford relief. Great care should be used that the exercise is not violent nor too long continued. There can be no absolute rule laid down to govern the patient in this matter—but her own observation and experience will help to decide the amount and kind that is most beneficial. In a general way, I would say exercise should be discontinued, for the time, when the patient *begins* to feel weary. After proper rest, the exercise may be resumed. Carriage riding is less useful than walking, as but few of the muscles are brought into play, while in walking every muscle is exercised; the breathing becomes more rapid and deeper; the lungs are expanded to receive large supplies of oxygen, which coming in contact with the blood in the lungs, enriches it

with life-giving properties. The patient soon realizes the benefit derived from this sort of exercise. The cultivation of flowers, and games such as lawn-tennis and croquet are healthful. We quote on this subject from the eminent Dr. Byford: "It is a great evil of the present state of society that a lady cannot find in useful employment that healthy tonic exercise for the body and mind which she needs. She must for muscular exercise, engage in the measured sameness of the quadrille, or the giddy whirl and violence of the waltz, or cramp her limbs to the steady routine of a system of calisthenics. What are all these for variety and adaptedness to their wants compared to the washing, ironing, sweeping, milking, churning, spinning, weaving, cooking, walking, running, of household engagements; the stimulus of needs; thinking of all these things; timing them; proportioning them; calculating, economizing, nursing, doctoring, advising, correcting, teaching and conducting little minds and bodies through the physical, moral and intellectual discipline which capacitates, unfolds and imbues them with what is good and useful? Woman's duties, taking them altogether, when well and appropriately performed, will do more than all the amusements ever invented can do, to keep women well and healthy in every particular."

If there were less servants in the household, there would be more healthy mothers and daughters. The predisposing cause of disease must be removed

before a cure can be effected. A weakened condition of the abdominal muscles, as has been previously shown, is the predominant cause of uterine misplacements and congestions. Then, in order to effect a cure of the diseased organs, exercise tending to strengthen these muscles must be resorted to. When any muscle or set of muscles is exercised, more blood is carried to the part, from which it receives strength and nourishment. Muscles unused become weak and powerless, and *vice versa.* When a patient is too weak to exercise his muscles, an assistant may do it for him—thus a person confined to his bed for weeks, with typhoid fever, loses all muscular power. By having the muscles rubbed and stretched thoroughly for hours each day, he will regain his strength rapidly. The Swedish movement is founded upon this principle of localized exercise, and has much in it to commend itself to the public mind. Dr. C. T. Taylor has written an excellent work upon the subject of localized movements, from which we have selected a few as being of especial value in toning up the uterine ligaments and abdominal muscles, and are easily applied: "The woman lies upon her back, upon a firm bed or couch, her hands tightly clasped over her head, and her feet drawn up to her body, with her knees strongly bent. Then with a moderate effort, she slowly raises her hips several inches from the couch, holds them there for about half a minute, and allows them slowly to return to the couch. This movement may be repeated, with short intervals of rest, five or six times.

"If the strength of the patient is not sufficient to perform these movements without too much fatigue, an assistant may aid her by placing a hand under the back near the hips, sustaining the body, according to the necessity of the patient. This movement will be found very effectual in strengthening the abdominal muscles and relieving congestion and inflammation of the womb."

Another beneficial exercise is found in the following method: The woman lies on a firm couch, face downward, resting the extremities of her body upon her elbows and toes. Then with a strong effort of the will, she raises her hips from the couch, so that her whole weight rests upon her elbows and toes. After maintaining herself in this position as long as her health readily permits, she will settle her body on the couch. Repeat three or four times. An assistant may aid a feeble patient the same way as in the previous example. These movements will elevate the womb in the pelvic cavity, as well as strengthen the abdominal muscles, increase the circulation, relieve cold hands and feet, and nervous headache.

Local treatment.—In mild, uncomplicated cases of uterine disease, the general methods of treatment, laid down in the foregoing chapters, will be sufficient to effect a cure. If, however, there are complications of a grave character, the advice and aid of a physician should be sought, as the recovery will be hastened by combining local treatment with the general treatment indicated in this

book. Injections of hot water alone into the vagina, perseveringly used, are of great value in relieving congestion and inflammation of the womb. Common table salt may be added to the hot water with benefit, in severe inflammation. If there is prolapsus of the womb from weak vaginal walls, copperas can be added in moderate quantities, one dram to each quart of water. In case of both ulceration and inflammation, an excellent remedy is found in the following prescription:

Take of—Pulverized Borax, two ounces;
Pulverized Alum, " "
Carbolic Acid, one dram.

Mix.—Dissolve one teaspoonful in a quart of hot water, and inject three times a day.

The benefit derived from vaginal injections, in inflammations of the womb, largely depends upon the perseverance in their use. As a rule, several quarts should be used at one time, and be repeated three or four times a day. A good syringe for this purpose is the Goodyear No. 7. It consists of a rubber bulb with two connecting rubber tubes. A glass syringe ought never to be used. Its use is simply barbarous in severe types of uterine disease. Another syringe which is valuable for weak patients is called "The Fountain Syringe." It consists of a large rubber bag capable of holding several quarts of water, to which is attached several feet of rubber tubing, at one end of which is attached a tube. The bag is suspended six or seven feet from the floor, while the patient sits

over a slop jar, placed upon the floor. The water is poured into the receiving vessel and the force of the stream thrown against the neck of the womb, is regulated by the height at which the bag is placed above the floor.

How to use injections.—As before stated, injections must be perseveringly used if beneficial. They should be continued from ten to twenty minutes, at one time, according to the severity of the inflammation. The temperature of the injections should be regulated by the condition of the patient and its effect upon her. Hot water is usually most desirable in acute inflammation, the symptoms of which are an internal burning sensation, which is greatly aggravated by exertion. Another remedy for acute inflammation of the womb, in praise of which too much cannot be said, is the following:

Take of—Permanganate of Potash, six grains;
Glycerine, two ounces.
Mix.—Apply on cotton, and insert into the vagina on retiring.

The best method of using the cotton, is to cut a four-inch square piece of snow-flake batting, fasten the four corners together with a soft twine; it will make a ball-shaped pledget, over the top of which is poured a little of the mixture. Press the pledget into the vagina as far as possible, while upon the back in bed. The twine remains between the limbs and furnishes a ready means to remove the cotton the next morning. The amount of discharge following the removal of the pledget, will be truly surprising. The permanganate of potash

should be dissolved in a little water before adding the glycerine.

In Chronic Cases.—Where the vaginal walls are much relaxed, it is wise to begin with tepid injections, and gradually lower the temperature of the water. The injections should never be prolonged where *cold* water is used more than five or six minutes at a time. If the patient is shocked by the use of cold water, it should be used warmer.

Patients who have been unable to sleep from pain in the back, limbs and pelvis, will often rest quietly after a warm hip bath, or a copious vaginal injection of hot water.

If the inflammation of the womb is attended with a vaginal discharge, any of the following remedies will be a valuable addition to the water: To a gallon of water, add any *one* of the following: Permanganate of potash, twenty grains; chlorate of potash, two drams; blue vitriol, one dram; iodide of potassium, two drams; glycerine, one ounce. If there is much uterine pain, a teaspoonful of laudanum may be used in a quart of hot water, or a tea made of hops, camomile, poppies, or slippery elm.

The directions as given in this chapter, if faithfully followed, are sufficient to cure almost any inflammation which has not extended into the body of the womb. In this case direct applications of iodine, tannin, nitrate silver and chromic acid must be made to the womb, through a speculum. The services of a skillful physician are needed. This is

a matter of vital importance, therefore let no charlatan attempt to treat the case. Much suffering has been engendered by the indiscriminate use of these powerful remedies. Rapid recoveries from severe uterine disease are rare, the time required ranging from three to four months, to one or two years.

If the nervous system has become much involved, the recoveries will be *very* slow. When the health is once established, a relapse is not likely to occur, if the patient strictly adheres to the advice given. Avoid tight clothing, late hours, undue exercise, exposures to sudden changes of temperature, heavy clothing borne by the hips and indigestible food.

The uterus and its supports.—The uterus is the organ of reproduction or gestation. Its position in the pelvic cavity is behind the bladder and in front of the rectum, beneath the intestines and above the vagina. It is held loosely in its position by folds of peritoneum, which inclose muscular fibers. There are also six ligaments which contribute to its support, three on each side. The broad ligaments extend from the border of the uterus to the sides of the pelvis, leaving the uterus suspended between them. The round ligaments are two in number and pass from the top of the womb to the pelvis; the utero-sacral ligament gives the posterior support. From the above description of the uterine supports, it is evident that it may be easily displaced and moved upward or

downward to a considerable extent. These natural supports are sufficient to maintain it in proper position, in conditions of health. If, however, the bowels have been crowded downward, and held in this position by too heavy and unsupported clothing, or tight lacing, the womb will also become displaced and diseased. The displacements may be either forward, backward, or latterly. When the womb is tipped forward it is called *anteversion*, when turned backward it is named *retroversion*. Displacements are rare laterally, though very troublesome when they do occur.

Prolapsus (Plate 28) or falling of the womb, is very common, and the result of complex causes. When the prolapsus is only partial, the uterus descends somewhat into the vagina. When complete, it passes down through the vagina and protrudes through the labia. Causes: There are many causes that lead to prolapsus, among which may be mentioned excessive weight of the womb from tumors; dropsy of the bowels; falling heavily upon the nates; weakening of the uterine ligaments, and the relaxing of the vaginal walls. The vaginal walls may become relaxed by too frequent child-bearing, a persistent leucorrhœal discharge, habitual constipation, excessive sexual intercourse and a lacerated perineum.

There is an inherent tendency in muscular fiber to contract, therefore uterine displacements, in their early stages, will recover readily upon the removal of the cause. It is different, however,

when by inflammation, congestion, or tumors, the uterus has become badly diseased. It is impossible to remedy these conditions while women persist in following blindly the mandates of fashion. Every organ has its own rightful place in the abdominal cavity, and if crowded out of its place, it in turn must occupy the place of another organ, until the topography of the abdominal cavity is lost, and the vagina in a measure loses its contractile power.

Abortions, as well as child-bearing, are calculated to induce falling of the womb. The organ is then large and bulky, the vagina weak and distended, and any attempt at such a time to maintain an upright position, would be almost certain to induce prolapsus. Sudden violence, as being thrown from a carriage, straining efforts in defecation and excessive strain upon abdominal muscles in lifting weights, will produce prolapsus.

Symptoms.—When falling of the womb comes on gradually, the symptoms are less acute. The neck of the womb may frequently descend to the vulva without producing serious effects. It frequently occurs, after child-birth, that the uterus is very much prolapsed, but if the patient lies in bed a proper length of time, there is rarely any ill effects from it, as the *tendency* of all disease is to recovery, under proper management.

When the womb is prolapsed by any sudden violence, it is attended with pain in the back, loins and limbs, a dragging sensation in the pelvis, which

is greatly aggravated by any exertion, an inability to maintain an erect position for any length of time. The organs in proximity to the uterus are more or less disturbed in the performance of their functions. The bowels become constipated by the undue pressure of the womb upon the rectum. The bladder is frequently dragged down with the uterus, so that it is difficult to urinate. The vagina becomes a dark red or even purple hue, and very sensitive to the touch.

Treatment.—The treatment should be directed toward removing the cause. The clothing should be light, loose and warm, and the weight of it supported by the shoulders. All tension upon the natural supports of the womb must be removed. If inflammation is present, use injections freely of hot water with salt in the proportion of a tablespoonful to two quarts of water—repeat several times a day. If constipation is present, use mild saline cathartics or injections of tepid water into the rectum. A stringent injection into the vagina for prolapsus of the womb, during the acute inflammatory stage, is very questionable treatment. After the inflammatory action has been subdued by hot water, use astringents for their tonic effect. The preferable astringents are alum and borax in equal parts—tannin, white oak bark and copperas. Pessaries in the acute stage should be avoided—and at any time should be applied only as a last resort, as more or less ulceration is liable to occur from their use, unless great care is taken to secure clean-

liness of the instrument as well as of the vagina. To aged women a properly adjusted pessary may afford great comfort, but it cannot be regarded as curative. One of the best made is Dr. H. G. Farr's uterine support, as it is combined with a partially elastic bandage, which is worn as an external support for the bowels while the pessary is placed in the vagina to support the uterus. The muscles of the abdomen should be strengthened by rubbing, kneading and bathing in tepid or cold salt water with a flesh brush or a coarse towel. The exercise given in the foregoing pages should be rigidly practiced. Cures are only effected by restoring the proper tone to the uterine ligaments and the abdominal muscles. A good fitting bandage, made of drilling, similar to one worn after child-birth, is often very useful in supporting the bowels.

Anteversion (Plate 25).—The womb in its natural position inclines considerably forward. The inclination of the uterus is such that it coincides with the axis of the pelvic cavity. In anteversion the womb falls still farther forward, sometimes to such a degree that it lies almost horizontally across the pelvis.

Causes.—During the period of development the womb is always anteverted, but after puberty it disappears usually. Fibroid tumors situated on the anterior base of the uterus, will produce anteversions by dragging the organ forward, pregnancy in the early stages, too great distension of

the bladder, wearing stays which press upon the body of the womb, and congestion of the uterus will cause anteversion.

Symptoms.—The body of the uterus presses upon the bladder and narrows its capacity to retain urine, thereby causing a desire to pass water frequently. If there is much inflammation attending the anteversion, there is often great pain in urinating. The water is highly colored and deposits a thick sediment. The patient finds the most discomfort in the upright position, and is therefore adverse to any activity.

Treatment.—It there are any complications, as inflammation, congestion or ulceration of the womb they should be removed, as they are frequently the cause, and until they are partially removed, active measures to rectify the anteversion could not be borne. The patient should lie upon the back with the hips elevated. To relieve pain and inflammation apply warm flaxseed poultices over the bowels, or flannels wrung out of a strong decoction of hops and vinegar.

Retroversion (Plate 26).—This disease is not frequent in women who have not borne children. The body of the womb falls backward upon the rectum, while the neck presses upon the bladder. It is the result often of a tumor, or an engorgement of the body of the womb, when sudden muscular efforts are sufficient to throw the uterus backward. Retroversion frequently follows labor, by the patient being compelled to lie upon the

back for days. The uterus is then large and exhausted, and readily falls into the hollow of the sacrum, from which position it cannot easily rise. The obstetric bandage is another cause of retroversion. After an exhausting labor the uterus is too weak and too heavy to rise into the pelvic cavity properly—the bandage is applied to save the contour of the figure, at the expense of the uterus, which is now unable to overcome all the forces combined against it.

Symptoms.—The symptoms of retroversion are almost identical with those of inflammation of the womb—pains low in the back and limbs—inability to walk—extreme nervousness and constipation is persistent from pressure of womb on rectum.

Treatment.—Remove the cause in the first indication. Subdue the inflammation by poultices and hot applications over the bowels, give cooling aperients; uterine supports should not be attempted while there is acute inflammation. After that has subsided measurably, Dr. Farr's uterine and abdominal support can be used with comfort. Any uterine support that is not worn easily should be removed at once, as they are then productive of harm.

Flexions of the uterus (Plate 27).—The terms *retroflexion* and *retroversion* are used almost synonymously, although differing slightly in detail. In retroflexion, the neck of the womb maintains its proper position, while the body falls backward. *Vice versa* in anteflexion.

Causes.—Diseased conditions of the womb are the provoking causes of flexions.

Symptoms.—The distinguishing difference between retroflexion and retroversion, is in the greater tendency to painful menstruation in the former, together with sterility.

Treatment.—The treatment is practically the same as for anteversion and retroversion. So far as possible remove the cause. Often it is of great value for the patient to travel, and form new acquaintances, visit new scenes; anything that will serve to take the patient's mind from a contemplation of her condition, will be of incalculable benefit. The mind has more to do with binding our diseases to us than we can possibly realize, unless we watch the effect of mind over matter for ourselves. A careful study of this subject will repay the effort.

How to diagnose uterine disease.—From the foregoing pages it will be observed that the symptoms of any uterine disease, accompanied with inflammation, are very similar. There are, however, a few distinguishing points. If the patient has prolapsus, the neck of the womb will be found low in the vagina. The size varies with the degree of congestion. There is an opening in the center, leading to the body of the womb. If the body of the womb is felt pressing against the rectum, retroversion may be suspected. If there is a desire to urinate frequently, together with a tumefaction resting upon the bladder, it is evidence of anteversion.

In all cases where the patient cannot clearly diagnose her own case and intelligently apply the remedies laid down in this work, she should consult a skillful physician, as timely aid may save years of suffering.

Tumors of the uterus.—There are three varieties of tumors which are found frequently in the uterus, viz: Fibrous, polypus and cancer. The two former are not usually fatal, while the latter is regarded always with grave apprehensions, from being of malignant character.

Fibroid tumor.—The similarity of the muscular fibers of the womb with that of fibrous tumors, is fully established. Tumors may develope in any part of the womb, but they are most frequent in the body. They vary much in size and numbers, over thirty having been found in one patient. The majority of these tumors, however, are single, and may attain great size.

Causes.—Little is absolutely known in regard to the causes leading to their development, but among the predisposing causes are menstrual disorders, sterility, age and race. The colored people are most liable to tumors. Tumors seldom appear after menstruation ceases, nor before puberty. The time of life most liable to their development, is during the period when the generative organs exhibit the greatest activity.

Symptoms.—The patient often has profuse hemorrhages, pains in the pelvic cavity, irritation of the bladder and rectum, profuse leucorrhœal dis-

charge, and frequent watery discharges from the uterus; this watery discharge may be considered diagnostic of fibroid tumor. As the tumor enlarges, it can be distinctly felt through the abdominal walls.

Treatment.—The action of medicine in promoting absorption of fibroid tumors, is far less effective than desirable. Tonics are useful in a general way to build up the health if impaired. Iodide of potassium has been given in ten grain doses, three times a day, with partial results. Equal parts of iodine and glycerine applied freely over the abdomen, with a camel's hair brush, morning and evening, seems to exert a favorable influence in checking the growth of the tumor. Without doubt the most satisfactory results are obtained from the use of electricity, applied over the bowels. Good results have been observed from its use. In my experience nothing is so helpful. Tumors which have shown great activity previous to the menopause or "change of life," usually cease to grow, and often greatly decrease in size.

Polypus of the womb.—A polypus is a pear shaped tumor attached to the uterus by a small pedicle or stem. It developes in the neck of the womb most frequently, although no part of the uterus is exempt. When it forms in the neck of the womb, it frequently protrudes into the vagina, and may pass out at the vulva.

Cause.—Inflammatory action of the uterus, or obstructions to the menstrual flow, or anything

which tends to keep up active congestion, predisposes to the formation of polypus.

Symptoms.—The symptoms of polypus are similar to those of fibrous tumors, as pain in the back, and hemorrhages; the latter is a pretty constant symptom, especially if the polypus lies in the neck of the womb or vagina, and is subject to constant irritation.

Treatment.—The polypus should be expelled from the body of the uterus, if possible, by the continued use of ergot. If attached to the neck, the pedicle should be severed. The operation is attended with little pain or danger. There are frequently a number existing at the same time. At one time I removed from a patient fourteen polypi. Any inflammation following their removal should be relieved by local applications.

Cancer of the womb.—The breast, stomach and womb are the organs in which malignant tumors most frequently develop. According to statistics cancer of the womb is most common—and the point of attack is usually the neck of the womb. From a hardened and nodulated condition it soon passes into an ulcerative and sloughing state, and continues to destroy the surrounding tissues, till death comes to the relief of the sufferer. The duration of the disease varies from a few months to a few years. It is incurable, and will reappear after surgical removals.

Cause.—The cause of cancer is supposed to be from some peculiarity of the blood. It developes

most frequently in families who have inherited scrofulous tendencies or consumption. Cancer occurs most frequently in middle life. It is an established fact that inflammation of the uterus is *not* a provoking cause of cancer.

Symptoms.—This malady frequently makes considerable advancement without attracting much attention. When the tumor begins to slough away hemorrhages appear, and offensive discharges which produce abrasions in the vagina—the complexion assumes a waxy hue and the general health fails. Sometimes cancer is attended with sharp, lancinating pains.

Treatment.—But little can be done to arrest the progress of the disease. The indications are to control the hemorrhages, relieve the pain and the offensiveness of the discharges—for the latter purpose a solution of permanganate of potash, in the proportion of ten grains to the quart of water or twenty drops of carbolic acid to the same amount of water, will be found useful to inject several times a day. The pain may be controlled by opium or morphine. No other remedy will afford such relief. The general health must be supported by a very nutritious diet—as rare beef, cream, soft eggs, pure wine, etc. If the appetite is poor, give tonics.

Do not submit the case to a charlatan doctor. The patient who can find no relief in the care of a conscientious, painstaking and learned physician, will gain nothing in the hands of a conscienceless quack.

Be cheerful and chatty in the presence of the patient. Divert her thoughts from her condition as much as possible. Ventilation of the apartment is essential.

Leucorrhœa, or "whites."—The term implies the presence of a non-sanguineous discharge from the female generative passages. It is a very common disorder among women, and no age is exempt from it. It sometimes appears catarrhal in its nature, and is easily arrested by *rest* and injections of cold or tepid water. The menstrual period is usually preceded by a leucorrhœal discharge, as a result of temporary congestion, and passes away shortly after the menses cease. When leucorrhœa is *constant* and produces an itching of the external parts, or a burning sensation in the vagina, it is an indication of uterine disorder, and should be arrested at once. There are several varieties of discharges from the generative organs which are called leucorrhœa—any of which is caused by an increased secretion of the mucus lining of the affected part.

Causes.—General weakness and debility may produce leucorrhœa; this general weakness may be associated with some derangement of the liver, lungs or heart. It may result from a general lowering of the vitality or nutrition of the body which constitutes the first stages of consumption. Local causes are any foreign growth in the womb; flexions, polypi in the uterus; congestions, and prolapsus of the uterus. Leucorrhœa is often produced

in children by seat worms in the rectum, in which case there is more or less itching in the vagina; or it may occur from simple debility.

Treatment.—The first care should be to remove the cause. If leucorrhœa is caused by physical weakness, tonics should be given, and careful hygienic measures adopted, such as baths, friction of the skin, outdoor life, change of scene, exercise, proper attention to the diet. All habits of a known pernicious tendency must be avoided. Injections are of great value, and ought to be used two or three times a day. In winter the water should be tepid or hot; in the summer, cold or tepid. Injections containing alum, sulphate of zinc, borax, oak bark tea, and camomile tea are beneficial. If the leucorrhœal discharge arises from congestion of the body or neck of the womb, injections of iodine are very useful, in the proportion of twenty drops to the pint of water. Local treatment is often the only real curative remedy for leucorrhœa.

In conclusion, I fervently hope that this little book will, through God's blessing, be to my reader, during the whole period of her motherhood, a friend in her need, a guide in her difficulties, and a silent but trusty counselor in all things pertaining to her health and the health of her children. I sincerely trust that it will give her as much pleasure in reading these pages as it has given me in writing them.

FINIS.

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GLOSSARY.

Accoucher.—Surgeon in child-birth.
Allantoise.—Membrane connecting the fœtus and chorion.
Amenorrhœa.—Suppression of the menses.
Anteversion.—Tipped forward.
Anteflexion.—Bent backward.
Antiphlogistic.—Opposing inflammation.
Aperient.—Mildly cathartic.
Astringent.—Binding.
Cathartic.—Laxative.
Chorion.—The external fœtal membrane.
Colon.—The large intestine.
Congestion.—Overcrowded bloodvessels.
Cutaneous.—Pertaining to the skin.
Diaphragm.—Parietal muscle between the chest and abdomen.
Diagnosis.—Determination of disease.
Diphtheria.—Malignant disease of the throat.
Dysmenorrhœa.—Painful menstruation.
Emaciation.—State of being reduced to leanness.
Embryo.—Egg.
Enciente.—Pregnant.
Enema.—Injection.
Fallopian Tubes.—Oviducts.
Febrifuge.—Medicine to remove or mitigate fever.
Flatulence.—Wind in stomach or intestines.
Fœces.—Discharge from the bowels.
Fœtus.—Child in the womb.
Fœtal.—Pertaining to the fœtus.
Fomentation.—Hot applications to the body.
Fimbriated.—Finger-like.
Genitalia.—Birthplace of the egg.
Gestation.—Period of growth of child in the womb.
Graafian Follicle.—Ovarian cavity containing egg.
Hemorrhoids.—Piles—Tumors in and about the anus.
Hygiene.—The art of preserving health.
Intra-Uterine.—Within the womb.
Labia.—Lips of the vagina.
Laxative.—Cathartic.

Malaise.—Sickness. Discomfort.
Mammary.—Pertaining to the breasts.
Massage.—Rubbing and kneading the body.
Meno-Pause.—Change of life.
Menstruation.—Monthly flow from the womb.
Menorrhagia.—Profuse menstruation.
Nates.—The buttocks.
Obstetrics.—Midwifery.
Os Uteri.—Mouth of the womb.
Osseous.—Bony.
Ova.—Eggs. Plural of egg.
Ovary.—Generative organ in which the ova are developed.
Oviducts.—Fallopian tubes.
Ovulation.—Laying of the egg.
Ovum.—An egg.
Parieties.—Walls of a cavity.
Parturition.—Child-birth.
Pelvis.—Lower part of the abdomen.
Peritoneum.—The membrane lining the walls and covering the organs in the abdomen.
Peristaltic.—Worm-like movements of the bowels.
Placenta.—After-birth.
Pre-natal.—Before birth.
Prolapsus Uteri.—Falling of the womb.
Pulmonary.—Pertaining to the lungs.
Rectum.—Lower portion of the bowels.
Renal.—Pertaining to the kidneys.
Retroversion.—Falling backward.
Retroflection.—Bending backward.
Saline.—Having the qualities of salt.
Salivation.—Unnatural flow of saliva.
Sanguineous.—Bloody.
Umbilicus.—Navel.
Urinary.—Pertaining to the urine.
Uterus.—The womb.
Vagina.—Passage leading to the womb.
Varicose veins.—Veins permanently dilated with blood.
Vesicle—Small cavity or sac in the human body.
Vulva.—Outer lips of the vagina.

TESTIMONIALS.

MATERNITY is a splendid book. Every woman should have it.—MRS. MILLER, Columbus, Texas.

All wives and mothers should have and read this useful and instructive book.—J. W. MORGAN, M. D., Port Byron, Ill.

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After a careful examination of the work entitled MATERNITY, a book for every wife and mother, with its accompanying anatomical illustrations, I have no hesitation in recommending it as a work worthy the attention of every woman. The subject matter is treated in a common sense and scientific manner, and is therefore no "cure all" quackery. I consider it a work of real worth and one which ought to be studied by every woman.—F. A. HARGRAVE, M. D., Palo, Michigan.

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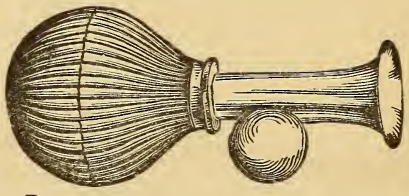

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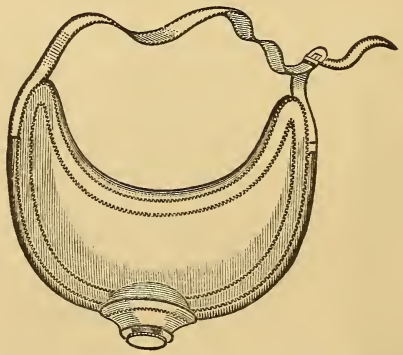

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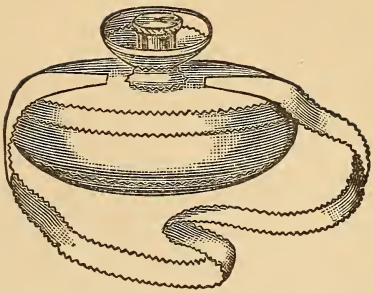

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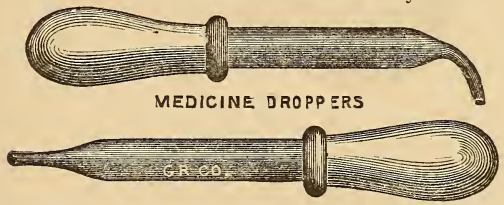

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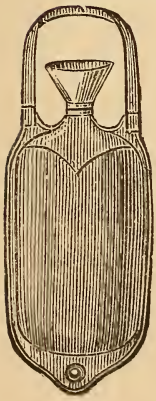

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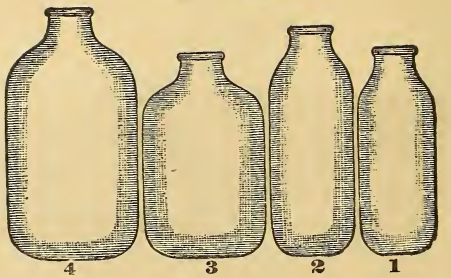

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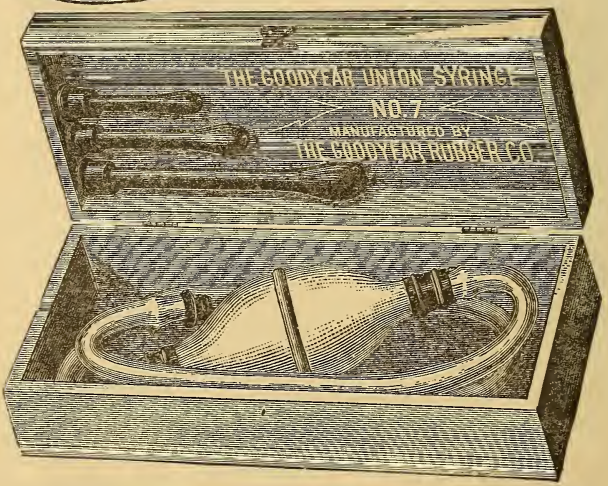

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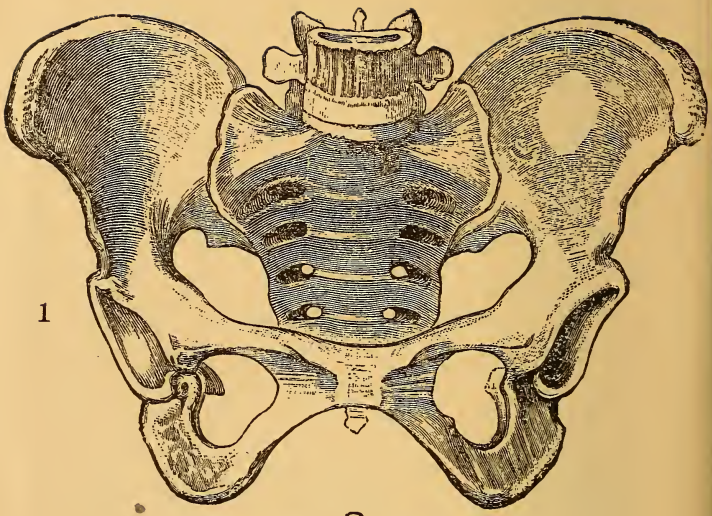

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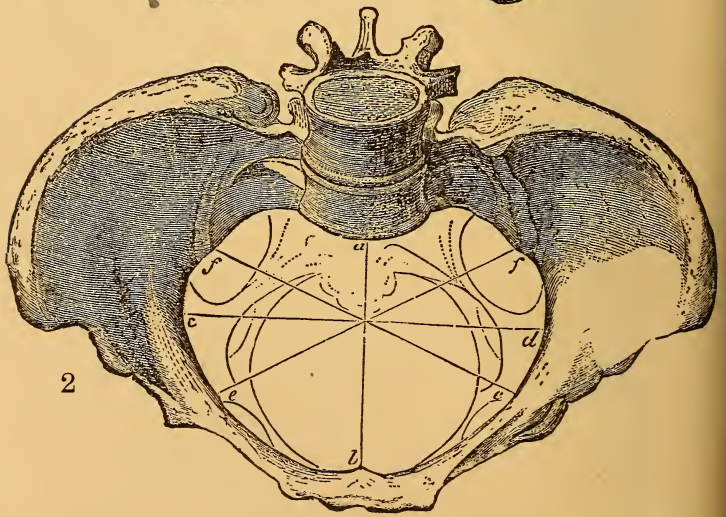

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Plate 1. *The Pelvis.* So called from its resemblance to a basin. It is a bony ring interposed between the lower end of the spine, which it supports, and the lower extremities upon which it rests. It is composed of four bones,—the two ossa innominata, which bound it on either side and in front, and the sacrum and coccyx, which complete it behind. The pelvis is divided, for convenience of explanation, into the false and true pelvis.

Plate 2. *The False Pelvis.* The lines *a b*, *c d*, and *e f*, show the relative diameters of the false or upper pelvis. This broad shallow cavity is fitted to support the intestines and to transmit a part of their weight to the anterior wall of the abdomen.

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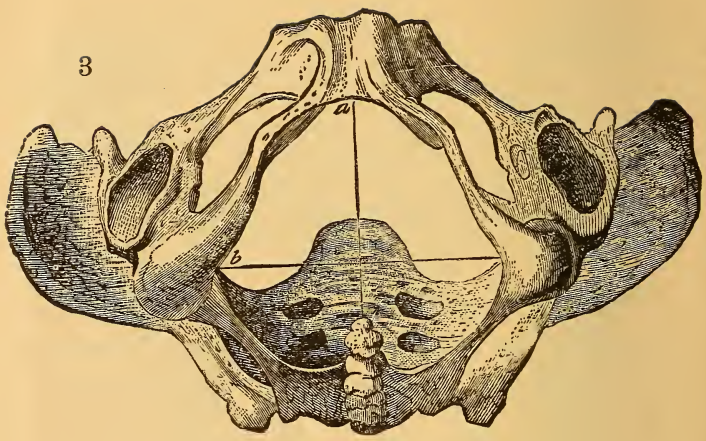

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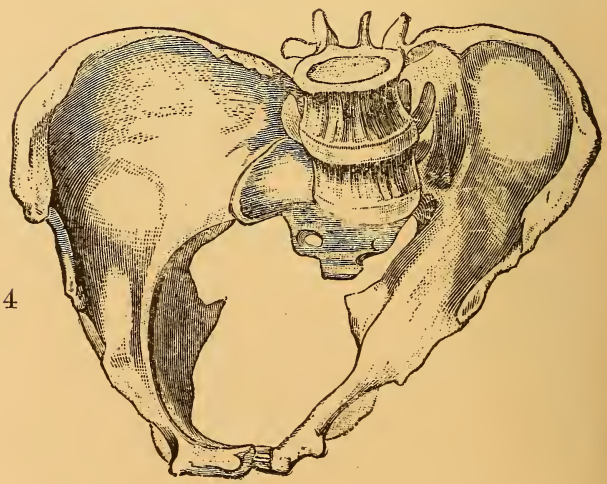

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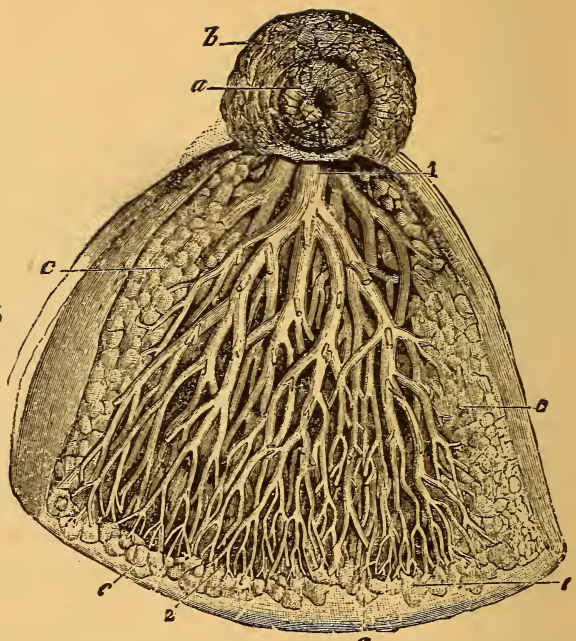
Plate 3. *The True Pelvis.* The lines *a* and *b* show the diameters of the true pelvis, which is all that part situated beneath the lines in plate 2. It is smaller than the *false pelvis*, but its walls are more perfect. The pelvis is replete with interest, since through it must pass the fœtus or unborn child.

Plate 4. *A Flattened or Deformed Pelvis.* From a casual glance at plates 1, 2, 3 and 4, it will be seen that the size and shape of the pelvis may have much to do with the ease or pains of labor.



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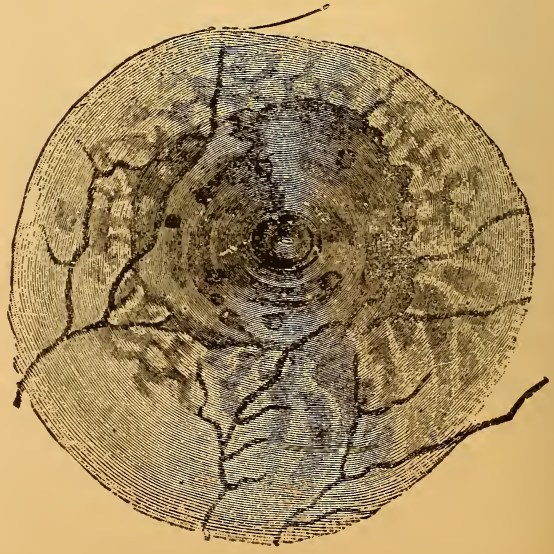

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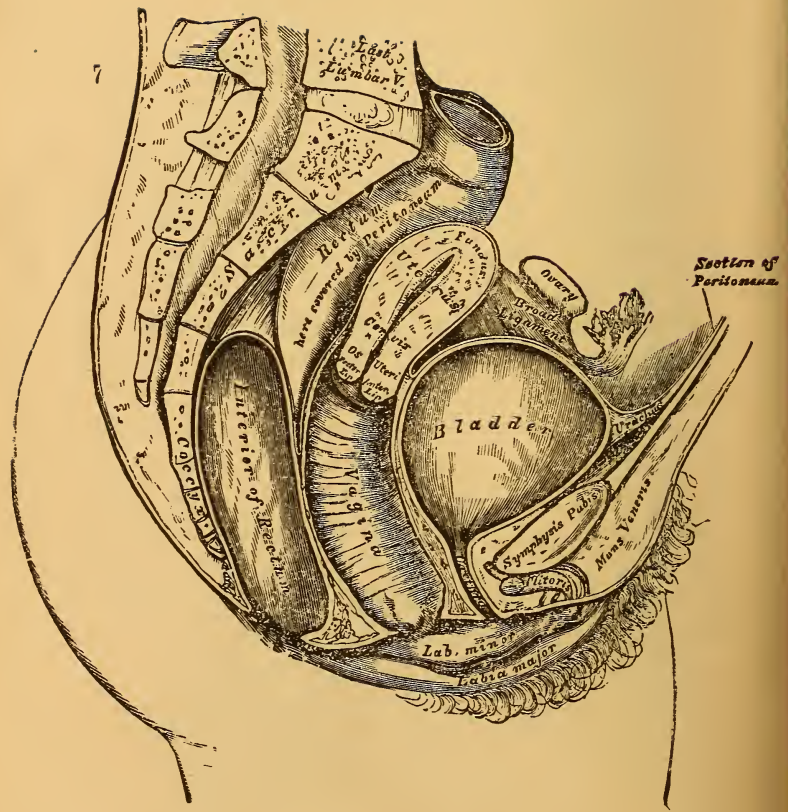
Plate 5. *Mammary Gland; a*, nipple, the central portion of which is retracted; *b*, areola; *c*, *c*, *c*, *c*, *c*, lobules of the gland; 1, sinus or milk duct; 2, extremities of the milk duct.

Plate 6. *Showing the appearance of the Areola.* The surface of the nipple is dark colored, and surrounded by an areola, having a colored tint. In the virgin the areola is of a delicate rosy hue; about the second month of impregnation, it enlarges and acquires a darker tinge, which increases as pregnancy advances, becoming in some cases, a dark brown or even black color. These changes in the areola are of extreme importance in forming a conclusion in a case of suspected pregnancy.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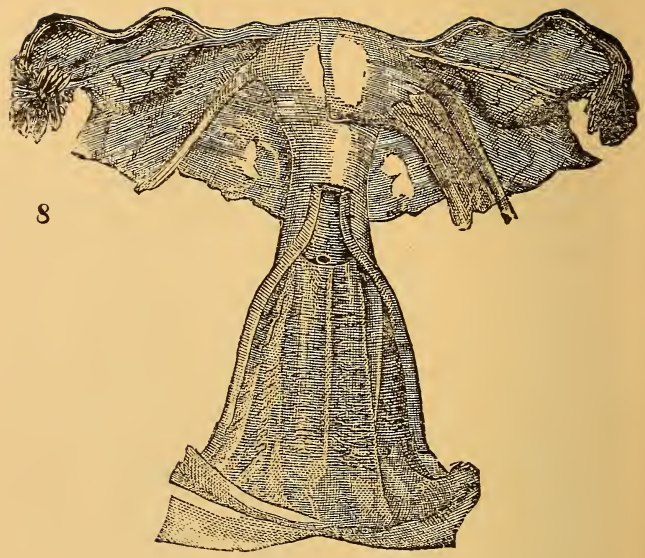
Last Lumbar V.
Sacrum
Coccyx
Uterus covered by Peritoneum
Fundus
Uterus
Ovary
Broad Ligament
Section of Peritoneum
Os Uteri
Vagina
Bladder
Urethra
Interior of Rectum
Symphysis Pubis
Mons Veneris
Meatus
Clitoris
Lab. min.
Labia major

Plate 7. *Section of the female Pelvis showing viscera.*

Plate 8. *The Uterus.* This is the organ of gestation, receiving the fecundated ovum in the cavity, retaining and supporting it during the development of the fœtus, and becoming the principal agent in its expulsion at the term of parturition. In the virgin state it is pear-shaped, flattened from before backward, and situated in the cavity of the pelvis between the bladder and rectum; it is retained in its position by the round and broad ligaments on either side and projects into the upper end of the vagina below. The uterus measures from two to two and a half inches in length, one and a half inches in breadth, at the upper part, and three-fourths of an inch in thickness. Its weight is from one to one and a half ounces. The cavity of the uterus is small in comparison to the size of the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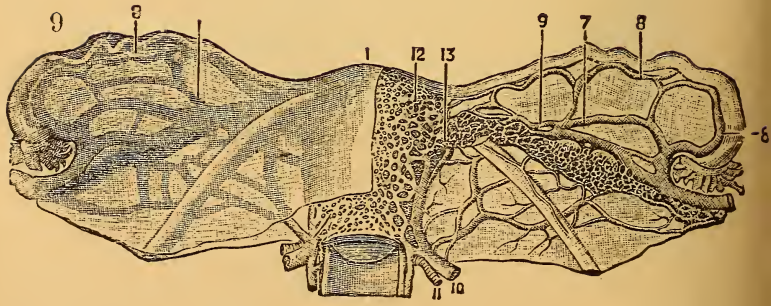
9
8
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Plate 9. *Uterine and utero-ovarian veins.* 1. Uterus seen from the front, its right half is covered by the peritoneum; 7, utero-ovarian vessels; 8, 8, 8, veins from the Fallopian tube; 10, uterine vein; 11, uterine artery.

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organ. The cut shows the uterus and its appendages; ovaries in the broad ligaments; oviducts and fimbriated extremities; round ligaments; vagina laid open, showing the mouth of the womb and the folds in the mucuous membrane. The *vagina* is a membranous canal, extending from the vulva to the uterus. It is cylindrical in shape, flattened from before backwards, and its walls are usually in contact. Its length is about four inches along its anterior wall, and between five and six along the posterior wall. It surrounds the vaginal portion of the cervex-uteri, a short distance from the os (or mouth of the womb) and its attachment extends higher up on the posterior than on the anterior wall of the uterus.

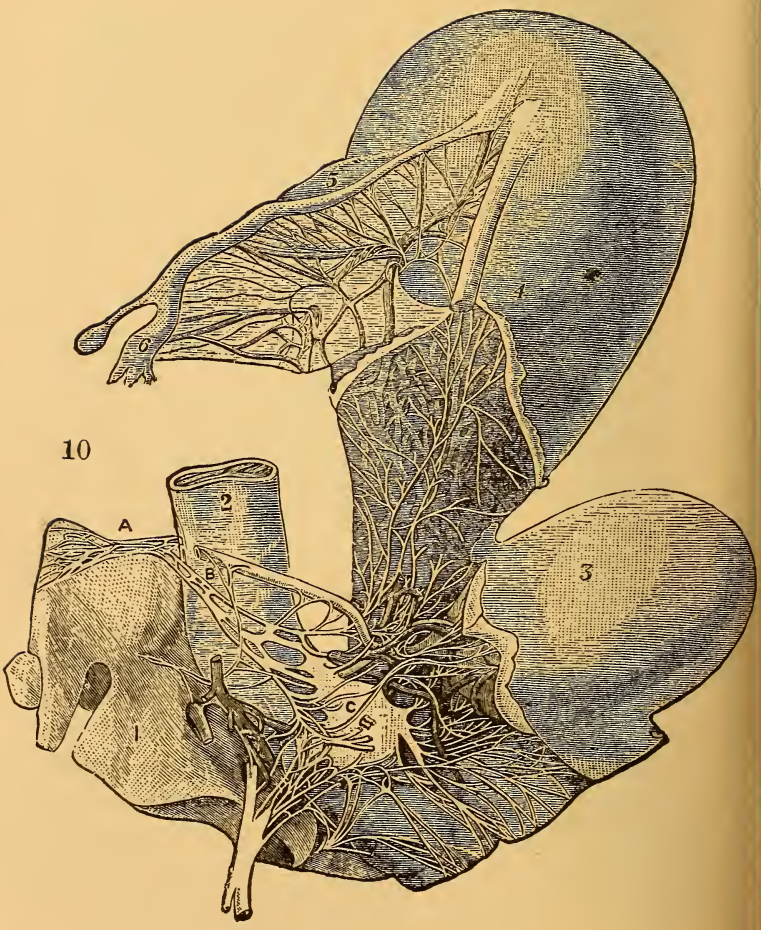
10
A
2
B
C
1
3

Plate 10. *Nerves of the Uterus.* 1, sacrum; 2, rectum; 3, bladder; 4, uterus; 5, ovary; 6, extremity of fallopian tube. (See Plate 12.)

The Fallopian tubes, or oviaducts, convey the ova or egg from the ovaries to the cavity of the uterus. They are two in number, one on each side extending from each superior angle of the uterus to the sides of the pelvis. Each tube is about four inches in length; its canal is exceedingly minute, and commences at the superior angle of the uterus by a minute orifice which will barely admit a fine bristle; it continues narrow along the inner half of the tube, then widens into a trumpet shaped extremity, the margins of which are surrounded by a series of fringe-like processes, termed *fimbriae*. One of these processes is connected with the outer end of the ovary. The *Ovaries* are analogous to the testes in the male. They are oval shaped bodies, of an elongated form, flattened from above downwards, situated one on each side of the uterus and below the Fallopian tubes. Imbedded in the meshes of the ovaries are numerous small, round, transparent vesicles, in various stages of development. These are called *Graafian follicles*, and are the ovisacs containing the ova. These follicles are,

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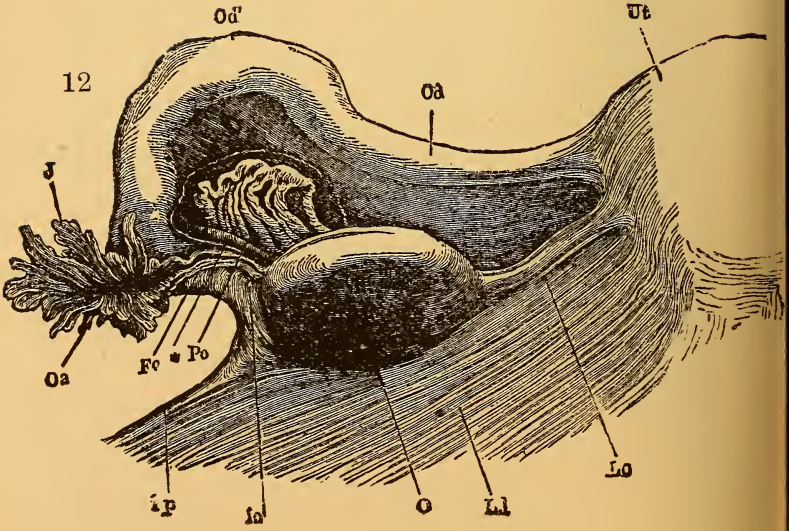

Plate 11. *Arterial vessels in a uterus ten days after delivery.* 1. The uterus or womb; 2, mouth of the uterus; 3, 3, round ligaments; 4, 4, Fallopian tubes; 5, right ovary; 6, 7, 8, 9, 10, 11, arteries branching to the uterus.

Plate 12. *Ovary aad Fallopian tube.* *Od*, Fallopian tube; *O*, ovary; *Oa*, fimbriated extremity of the tube; *Ut*, section of the uterus or womb.

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during their early development, small and deeply seated in the substance of the ovaries. At puberty, the ovaries enlarge, are more vascular, the graafian follicles are developed in greater abundance and their ova now becomes capable of fecundation. After gradually approaching the surface of the ovary, the follicle bursts, the ovum and fluid contained therein is liberated and passing into the Fallopian tube is carried to the uterus. The maturation and discharge of the ova occur at regular periods and is indicated by menstruation. Should the union of the sexes take place at or about this time, the ovum may be fecundated.

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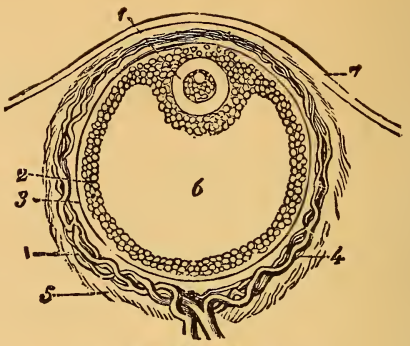

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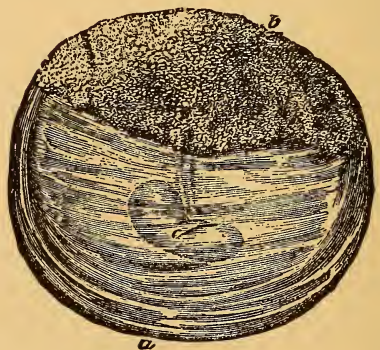

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Plate 13. *Graafian Follicle.* 1, ovum; 2, 3, membranes of the follicle; 4, its vessels; 6, cavity containing fluid in which is suspended the ovum; 7, external covering of the ovary.

Plate 14. *Ovum and Embryo.* The term *embryo* is applied to the product of conception up to the third month, after which time the term *fœtus* should be subsituted.

Plate 15. *Human Embryo at the third week* showing villi covering the entire chorion.

Nourishment and development of the embryo and fœtus. The ovum in passing through the Fallopian tube increases in size from one one-hundred and twenty-fifth of an inch to one-fiftieth or one twenty-fifth of an inch by absorption or yolk nutrition. (See plate 14). As the egg is small it can furnish nutriment for but a short time. About six days after conception takes place, a membrane forms around the ovum called *the chorion.* This serves to anchor the ovum to the walls of the uterus. From the chorion minute hollow tubes ramify in all directions, (See plate 15), and coming in contact with the walls of the uterus draw nourishment from the mucous membranes which line that organ. This nourishment is transmitted to the embryo by means of an organ connecting it with the chorion, and called the *allantois.* The allantois in time develops into the umbilical cord, the villi of the chorion diminish

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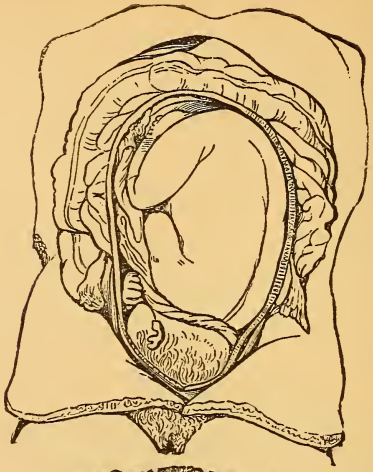

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Plate 16. *Fœtus and surroundings at seventh month.*

Plate 17. *Fœtus and membranes at fifth month.*

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and finally are obliterated, save at the junction of the allantois with the chorion, where they rapidly enlarge, and this portion at the end of the second month develops into the placenta, from which nutriment is furnished to the fœtus. (See explanation to plates 24 and 25.) "The *growth of the embryo* after fecundation is very rapid. On the *tenth* day it has the appearance of a semi-transparent, greyish flake. On the *twelfth* day it is nearly the size of a pea, filled with fluid, in the middle of which is an opaque spot, presenting the first appearance of an embryo, which may be clearly seen as an oblong or curved body and is plainly visible to the naked eye on the *fourteenth* day. The *twenty-first* day the embryo resembles an ant or a lettuce seed; its length is from four to five lines and its weight from three to four grains. Many of its parts now begin to show themselves, especially the cartilaginous beginnings of the spinal column, the heart, etc.

The *thirtieth* day the embryo is as large as a horse fly, and resembles a worm bent together. There are yet no limbs, and the head is larger than the body. When stretched out it is nearly half an inch long. Toward the *fifth* week the head increases greatly in

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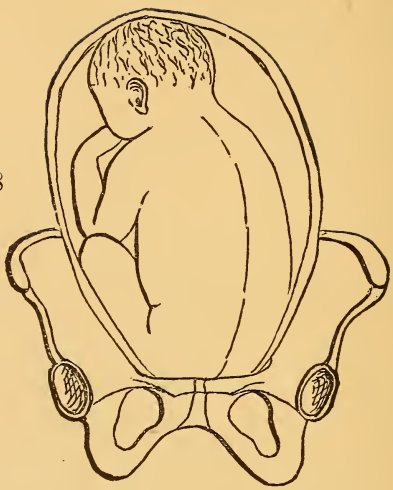

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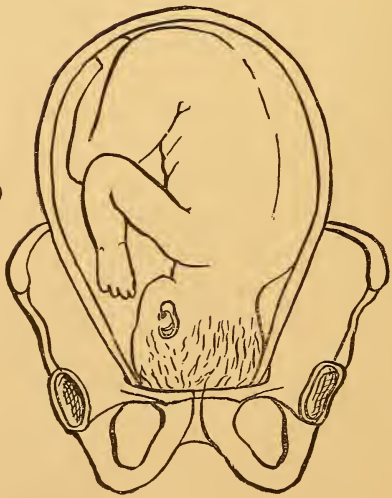

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Plate 18. *First breech presentation.*

Plate 19. *First head presentation.*

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proportion to the remainder of the body, and the rudimentary eyes are indicated by two black spots turned toward the sides, and the heart exhibits its external form, bearing a close resemblance to that in the adult.

In the *seventh* week bone begins to form in the lower jaw and clavicle. Narrow streaks on each side of the vertebral column show the beginning of the ribs. The heart is perfecting its form, the brain enlarged and the eyes and ears growing more perfect and the limbs sprouting from the body. The lungs are mere sacs, about one line in length and the trachea is a delicate thread, but the liver is very large. The arms are still imperforate. In the seventh week are formed the renal capsules and kidneys. At *two months* the forearm and hand can be distinguished, but not the arm; the hand is larger than the forearm, but it is not supplied with fingers. The distinction of sex is yet difficult. The eyes are prominent, but the lids do not cover the eyeballs. The nose forms an obtuse eminence. The nostrils are rounded and separated. The mouth is gaping and the epidermis can be distinguished from the true skin. The embryo is from one and a half to two inches long and weighs from three to five drachms, the head forming more than one third of the whole.

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Plate 20. The fœtus, inclosed in its membranes, with expanding os uteri, in first stage of labor.

At the end of *three months* the eyelids are distinct but shut; the lips are drawn together; the forehead and nose are clearly traceable, and the organs of generation prominent. The heart beats with force, and larger vessels carry red blood; the fingers and toes are well defined, and muscles begin to be developed.

At the *fourth* month the embryo takes the name of *fœtus*. The body is six to eight inches in length and weighs from seven to eight ounces. The skin has a rosy color, and the muscles now produce a sensible *motion*. A fetus born at this time might live several hours.

At *five* months the length of the body is from eight to ten inches, and its weight from eight to eleven ounces.

At *six* months the length is twelve and a half inches; weight one pound. The hair appears upon the head, the eyes closed, the eyelids somewhat thicker, and their margins as well as the eyebrows are studded with very delicate hairs.

At *seven* months, every part has increased in volume and perfection; the bony system is nearly complete; length twelve to fourteen inches, weight two and a half to three pounds. If born at this period the fœtus is able to breathe, cry and nurse, and may live if properly cared for.

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Plate 21. *Twins in Utero*, head and breech presenting.

At *eight* months, the *fœtus* seems to grow rather in thickness than in length; it is only sixteen to eighteen inches long and yet weighs from four to five pounds. The skin is very red, and covered with down and a considerable quantity of sebaceous matter. The lower jaw, which at first was very short, is now as long as the upper one.

Finally, at *term* the fœtus is about nineteen to twenty-three inches long, and weighs from six to nine pounds. The red blood circulates, in the capillaries and the skin performs the functions of perspiration; the nails are fully developed."

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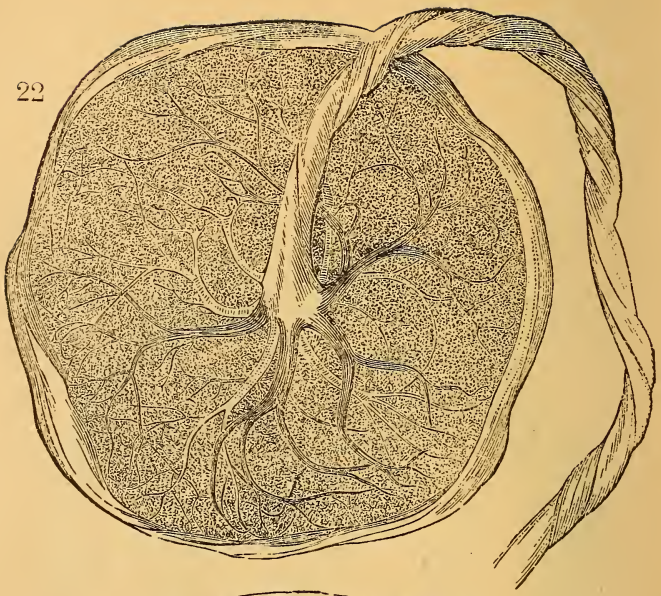

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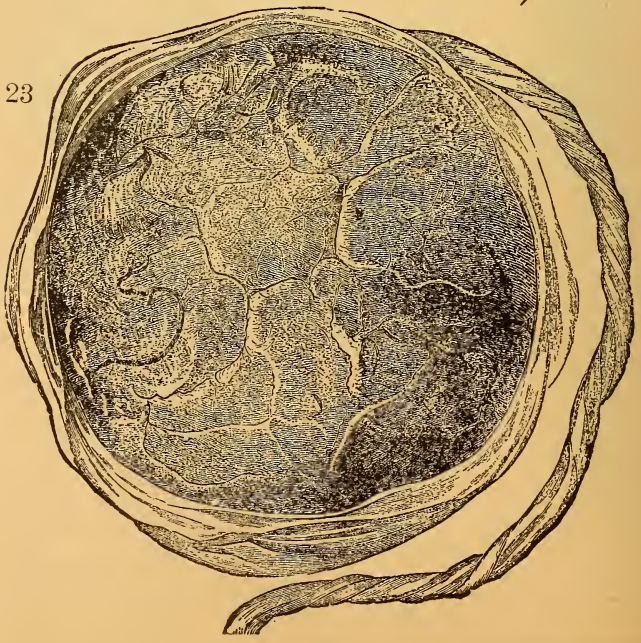

Plate 22 *Uterine Surface of the Placenta.*

Plate 23. *Fœtal Surface of the Placenta.*

The placenta is a soft spongy mass, nearly circular in form, measuring about seven and one-half inches in diameter and one inch in thickness at the insertion of the umbilical cord. Its weight is about one pound. The fœtal surface is smooth, while the uterine surface has a roughened, spongy feel. The uterine surface of the placenta coheres with the uterus and is connected by the umbilical cord with the fœtus. During intra-uterine life the placenta performs offices similar to those of the lungs and intestines after birth. It absorbs nourishment, renovates the blood, and discharges by exhalation the excrementitious matters originating in the process of fœtal nutrition. The umbilical cord consists of a sheath inclosing a gelatinous mass surrounding two umbilical arteries and one vein. Through the agencies of the umbilical cord as before stated the fœtus is nurished and the excesses discharged.

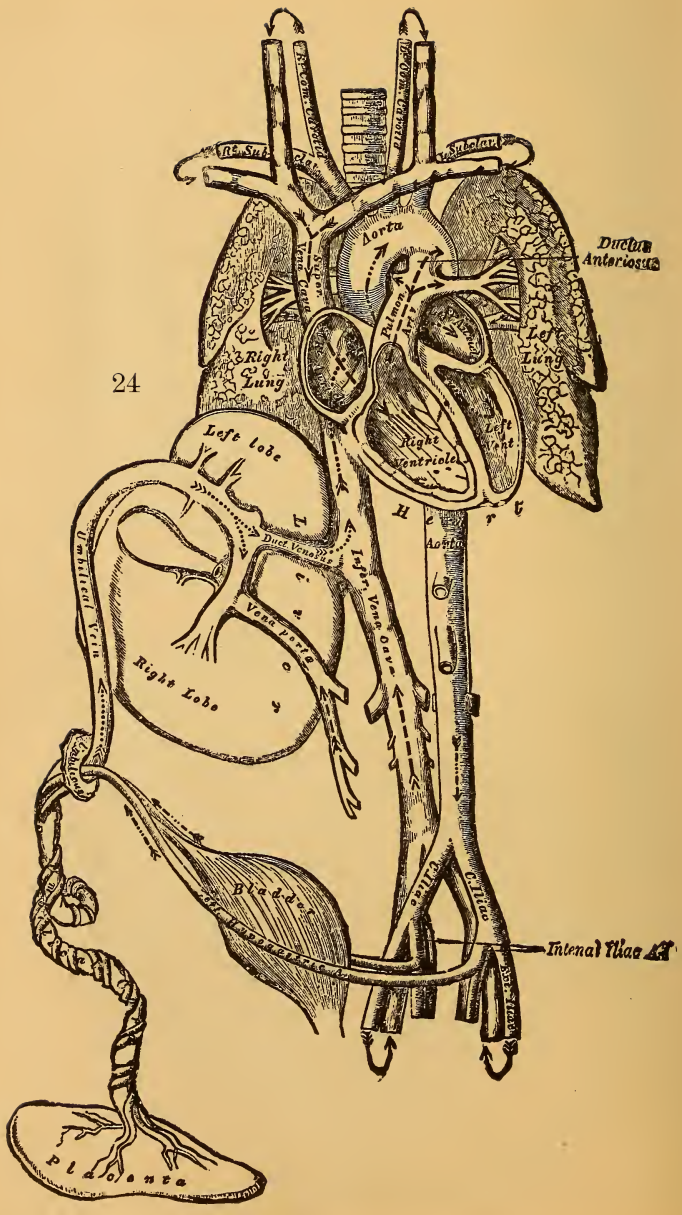
Aorta
Ductus Arteriosus
Left Lung
Right Lung
Left lobe
Right Ventricle
Left Vent.
Ductus Venosus
Aorta
Vena Porta
Right Lobe
Umbilical Vein
Bladder
Internal Iliac
Placenta

Plate 24. *The plan of fœtal circulation.* As the lungs of the fœtus are dormant the fœtal circulation is a very interesting phenomenon. The blood, passing from the right ventricle into the pulmonary artery, instead of entering the lungs, passes, almost entirely, through the ductus arteriosus into the decending aorta. From here the larger part is conveyed through the umbilical arteries to the placenta, where the interchanges with the maternal blood take place. After being thus renovated and recharged with oxygen, it collects within the umbilical vein and passes back to the fœtal liver. Here a part of it circulates through this organ, while the rest passes direct through the ductus venosus, into the inferior vena cava, where it again meets the blood brought from the liver by the hepatic vein, and the two mixing with that returning from the lower extremities and viscera of the abdomen enter the right auricle, and by the Eustachian valve pass into the left auricle where it becomes mixed with a small quantity of blood returning from the lungs by the pulmonary veins. From the left auricle it passes into the left ventricle, from here into the aorta, from whence it is distributed almost entirely to the upper extremities. Decending by the superior vena cava it enters the right auricle and from here into the right ventricle, and thus completes the circuit.

Plate 25. Anteversion of the womb.

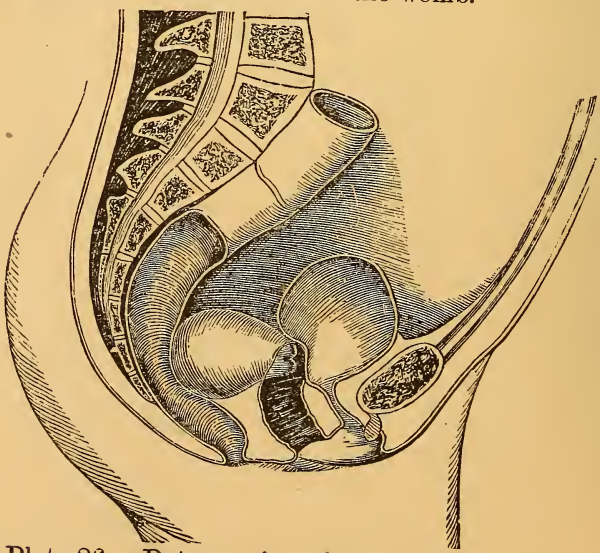

Plate 26. Retroversion of the womb.

LRB

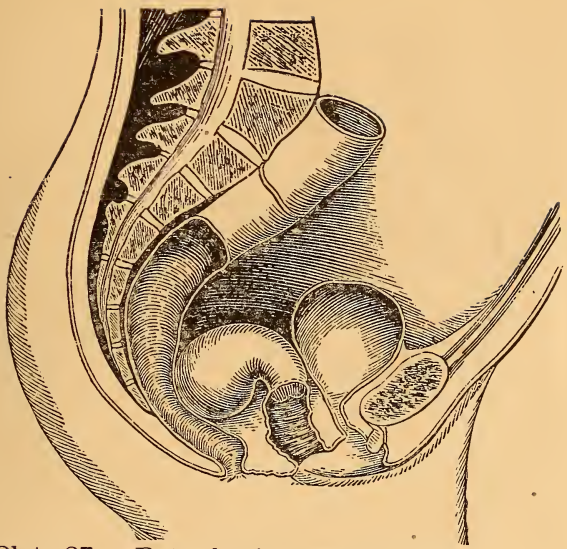

Plate 27. Retroflection of the womb.

Plate 28. *Prolapsus uteri*, or falling of the womb.

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